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The ARCHITECTVRAL RECORD

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The ARCHITECTURAL RECORD

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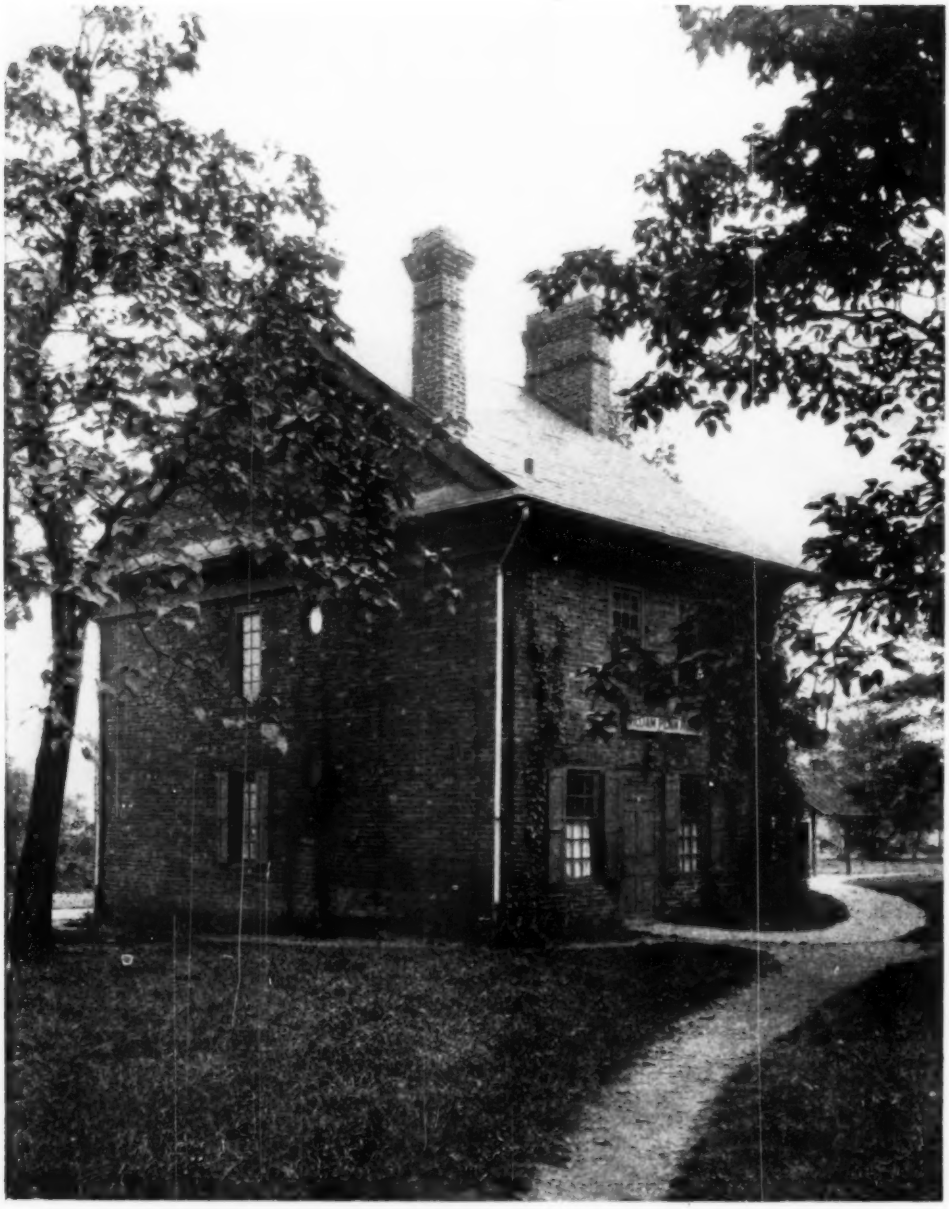


WILLIAM PENN HOUSE (1682-3)

The original site of this house was off Market and Front Streets, facing Letitia Court, Philadelphia. In 1883 it was removed to Fairmount Park, where it now stands — a unique example of a late Seventeenth Century town house.

The ARCHITECTVRAL RECORD

VOLUME 62 JULY, 1927 NUMBER 1

The REVIVAL of the COLONIAL

Philadelphia Restores its Old Houses on the Schuylkill

By

Marie G. Kimball

THERE HAS BEEN no more striking phenomenon in the artistic life of America during the past few years than the revival of interest in the Colonial. This is true not only of furniture, silver, pewter, prints and draperies, now popularly classified as antiques, but also of houses. Aside from isolated and sporadic attempts at the preservation of old houses on the part of individuals or local societies, the opening of the American Wing of the Metropolitan Museum of Art in New York City marked the first broadside, so to speak, of the new movement. Since then interest in our early history, in the arts and crafts of our ancestors, in their houses and their manner of life has grown apace; American "wings" and American "rooms" have sprung up overnight in the museums throughout the country.

While the revival of the Colonial was going forward in other cities, Philadelphia said little and accomplished a great deal. She had an unsuspected treasure in the old houses that dot the banks of the Schuylkill in Fairmount Park, and that have stood neglected but unmolested for one, and in many cases, for two centuries.

Here, without the necessity of tearing out a sixteenth century interior from one place and a seventeenth century room from another, were houses of every type and period, from the simple, square, brick dwelling built by William Penn in 1682, through the elaborately carved and ornamented mansions of the late eighteenth century, to the sophisticated yet simple houses of one hundred years ago. Every phase of style, in architecture and in furnishing, is represented in these park houses: the Restoration Period in the William Penn house, the Queen Anne, early Georgian, Chippendale, and, finally, the Adam in John Penn's Solitude. Nowhere else is it possible for the student to view the panorama of Colonial architecture at such close range and within so short a distance.

Beginning with the opening of Mount Pleasant, well known as the Benedict Arnold Mansion, in July, 1926, coincident with the Sesqui-Centennial, these splendid houses are one by one being put into condition, furnished, and opened to the public, under the general leadership of the Pennsylvania Museum. Mount Pleasant was closely followed by the restoration of Belmont, the magnificent mansion of Richard Peters on the west bank of the Schuylkill. Cedar Grove, the country seat of the Morris family, now standing on its new site in the Park, will be opened within a few months, and now comes the announcement of the impending restoration of Woodford, the lovely old mansion that is associated with more prominent Philadelphia families than any other in the Park. Potentially there are many more, such as the Rawle house with its great octagonal ballroom, and Solitude, the exquisite "little box" built by John Penn in 1784. Thus, within a brief period, Philadelphia is well on the way towards establishing a "colonial chain," offering whole houses, completely furnished and within a short distance of each other, instead of single rooms.

The oldest of the houses in Fairmount Park is the one built for William Penn in 1682-83. For two hundred years it stood facing Letitia Court, off Market and Front Streets, in the section that grew to be the heart of the city. In 1883 it was removed to Fairmount Park, where it now stands, one of the oldest brick houses in America, a unique example of a late seventeenth century town house. It is a small building, only some twenty by thirty feet. The chief interest in the interior, otherwise simple and unadorned, lies in the great chimney piece, with its rich mouldings and heavy mantel shelf. The fireplaces of most seventeenth century houses were mere openings in the long wall of the room, without ornament of any sort. In contrast to all of these, that of the Penn house was placed across the corner of the room, a feature that became fashionable in the time of William and Mary and that was so beautifully illustrated by Wren and Marot in Hampton Court Palace.

Cedar Grove, the second link in the "chain," is another house that has been transported to the park from its former site on Old Front Street Road, near Harrowgate Lane in Philadelphia County. In its building and in the furnishings, which have been preserved intact, the house has the unique distinction of representing three periods in the history of style. As it stands today, Cedar Grove was built and enlarged at three times, corresponding roughly to the three marriages in the family, in 1721, 1767, and 1795. It is a plain, grey stone dwelling of two stories, with a gambrel roof punctuated by dormer windows. The interior of the house, simple in character, has plaster walls with panelled chimney-breasts in two rooms. The kitchen of Cedar Grove is of unusual interest. The present one dates, in all probability, from the rebuilding of 1795. A huge fireplace occupies one side of the room. This is divided into three parts, one containing a large, open grate, the next a built-in oven, and the third a large, zinc water heater. The great iron kettles, the pots and pans that have served the family for generations, are still in their places.

A tour of the house with an eye only to the furniture represents an education in the history of style and taste. In no other house that has so far come to public attention has all the family furniture, china, silver and pewter been kept intact in the original house through several generations. A magnificent William and Mary highboy and lowboy, from the period of 1721 when Elizabeth Coates married Joseph Paschall, stands in one of the rooms. An unrivalled set of twelve matched Chippendale chairs, a great Chippendale sofa, and a grandfather clock are a legacy of the period of 1767, represented in the family by the marriage of Isaac Paschall and Patience Mifflin, and from 1790 we have the splendid Heppelwhite sideboard, a piece of unusual richness and beauty.

Belmont, the next link in the "chain," stands across the river, on the west bank. Here, on a high point overlooking the placid Schuylkill, and commanding an unsurpassed view of the city beyond, is situated the magnificent residence of Judge Richard Peters. The property

CEDAR GROVE

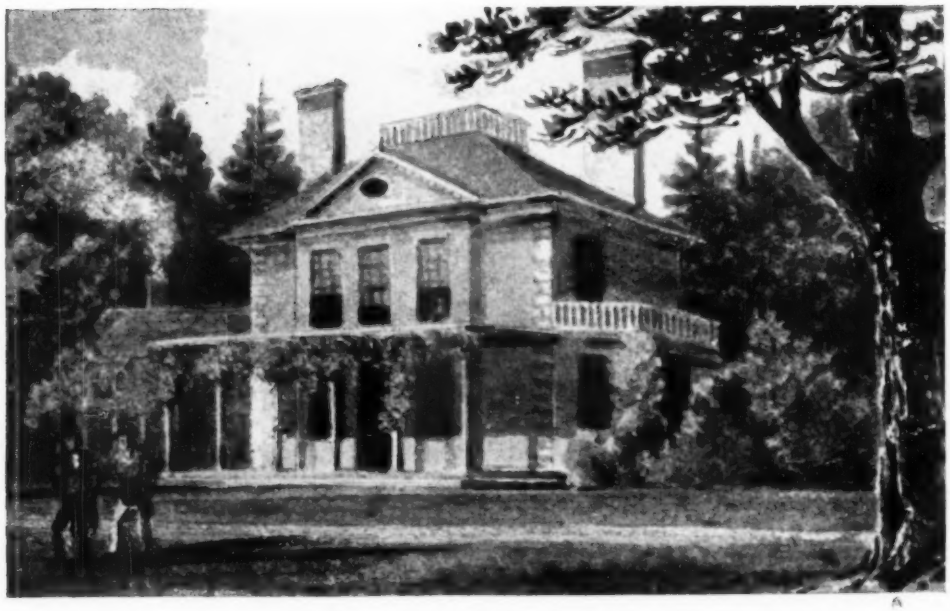
Photo H. F. Beidleman © J. B. Lippincott Company

was acquired by William Peters in 1721, and here, looking down upon the river, he lived in a small stone cottage, unpretentious except for an octagonal bay to the south. In 1745 brick wings were added across the river front of the cottage, again with an octagonal bay. By 1755 Peters' station was such that the simple stone house of his youth no longer sufficed and he built, just to the north of it, Belmont Mansion, much as it is today. It was a more ambitious and formal scheme than the original house, representing the early Georgian style of the period. The house was of two stories, with a simple, classical cornice and pedimented front.

The interest in the interior centers on the great central hall with its richly ornamented ceiling and splendid chimney piece. The ceiling is one of the half dozen stucco ceilings known to have existed in the colonies, the earliest in style of any, and may well have antedated them all. The Belmont ceiling displays a central open field surrounded by a broad band of ornament enclosed in heavy mouldings. This is relieved by large scallop shells, a feature of the Peters' coat-of-arms, heraldic cartouches over the doorways, and other plaster ornaments representing musical instruments as well as foliage. The ceiling of the stair hall, opening out of the great central room, is likewise ornamented with scrolled baroque pedestals, supporting an urn of flowers, and with a draped garland over the door.

The gardens of Belmont were quite as celebrated as the mansion house. Few others of the period were as elaborately laid out and there are only one or two instances, such as Mount Airy in Virginia, where sculptured figures are known to have been used as a feature of the garden. Contemporary descriptions mention a Chinese temple and a handsome summer house as objects of interest in the garden, and name the figures of Fame, Mercury and Diana as the subjects of the sculpture.

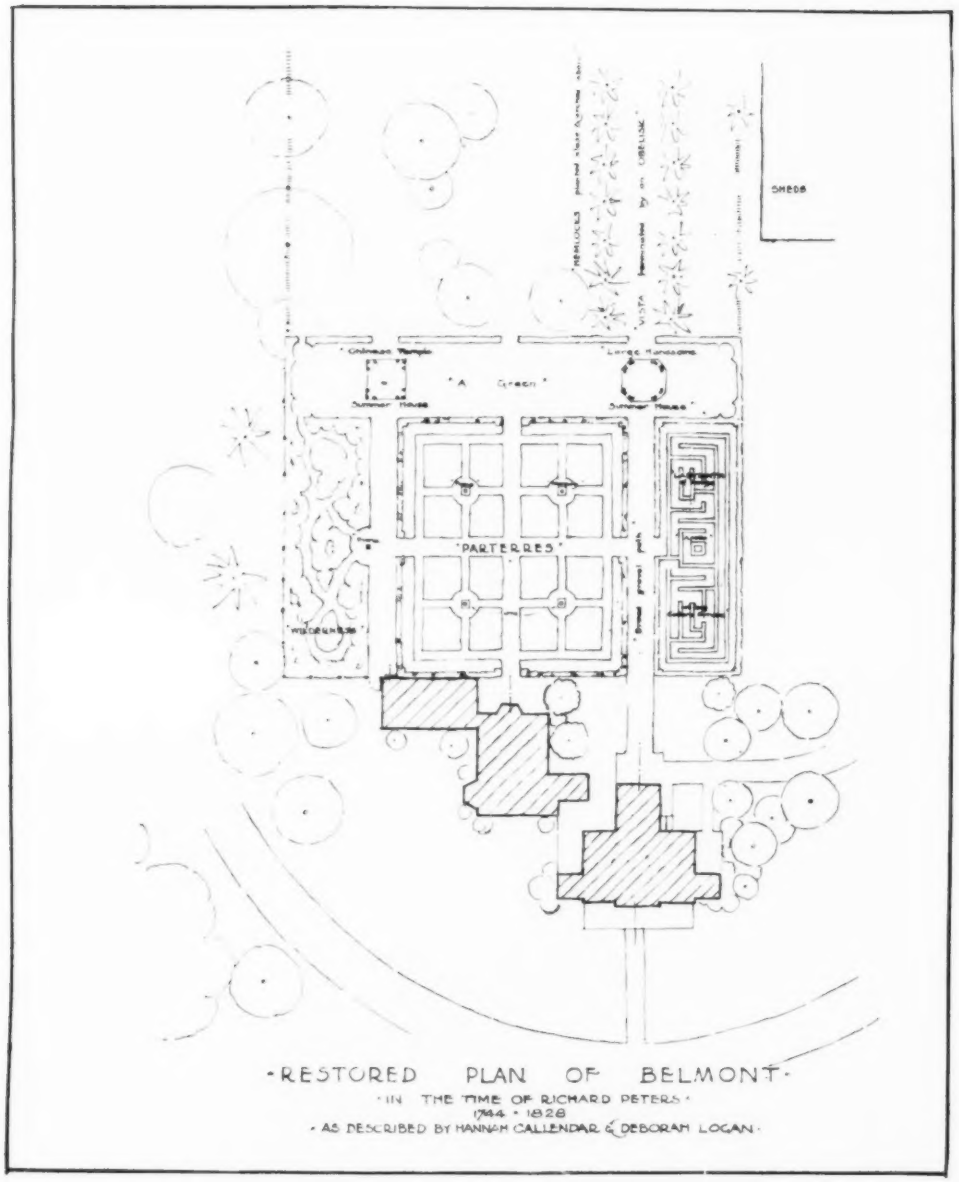
Two other houses are representative of the early Georgian style, the great period



BELMONT, AS IT APPEARED ABOUT 1830
(From an old water color)

The stone cottage at Belmont with the Bay added by William Peters

Detail of Ceiling in the Great Hall, Belmont



"RESTORED PLAN OF BELMONT"
"IN THE TIME OF RICHARD PETERS"
1744 - 1828
"AS DESCRIBED BY HANNAH CALLENDAR & DEBORAH LOGAN"

in the building of the Schuylkill mansions. These are the Rawle mansion, and Woodford, used for many years as headquarters for the Park Guard and now shortly to be opened to the public, completely furnished and restored. The land on which Woodford stands was granted to Dennis Rotchford and wife by William Penn in the year 1693. Whether Richford or his widow, who sold the property to Thomas Shute, built the original house, is not certain. In any case, we know that a one-story house, part of the present main block, was erected at an early period, very possibly in 1734, the date of a fireback still preserved in the house. The man-

BELMONT—CHIMNEY-PIECE IN AN UPSTAIRS ROOM
Courtesy of the Pennsylvania Museum

sion was enlarged to its present form probably by William Coleman after 1756, when he acquired the estate.

The glazed brick of the northern side of the house, the dull gold light that clings to its rain-washed walls, lend to Woodford something of the air of old Virginia. The house, with its simple, massive proportions, is full of a quiet and peaceful dignity. A heavy, white cornice dividing the two stories, marks off the original and smaller house from the later addition. Through a porticoed doorway, with a rich Palladian window above, one

BELMONT—THE UPPER HALL WITH ITS DECORATED CEILING
Courtesy of the Pennsylvania Museum

enters a hall that runs through the house. To the left is the great parlor with an unusually beautiful, carved chimney-piece and mantel shelf. An extraordinary feature of the room is the plastered cove, nearly two feet deep, which spans the space from the cornice, at the level of the window heads, to the ceiling. Upon the right of the hall is the dining room which is treated in the same manner as the parlor, with the exception that the chimney-piece has been omitted and a simple mantel shelf substituted. Window seats occupy the recesses below the win-

dow sills in this room. A short distance From Woodford, on a high bluff that rises straight and ominously from the river, stands the Rawle mansion. Although it is as yet no part of the museum chain it may be regarded as a potential link thereto. In style the house belongs to the same period as Woodford, although it was erected later, before 1760, and it is, indeed, somewhat reminiscent of the former. The bricks, to be sure, have been painted a pale buff and have thus robbed the resemblance of some of its obviousness. There is some excellent, simple woodwork to be found in the main body of the house, and there is the porticoed doorway so characteristic of the Schuylkill mansions. The chief interest in the house, however, lies in the great wing to the north, added after 1800, containing a magnificent octagonal drawing room, twenty by thirty feet. The woodwork, representative of the style of the early century, is simple and dignified, and does not distract attention from the beautiful proportions of the great room.

Woodford Mansion

The finest of all the old Philadelphia mansions, indeed of all the colonial houses in the North, is Mount Pleasant, built in 1761 by John McPherson, a Scotch privateer. This splendid estate, for it is more than one house, is the product of that moment before the Revolution, when Philadelphia outranked all the colonies in artistic achievement and when, socially, she outshone all her rivals. Something of the triumphant spirit of the time has been built into the house, and can be felt in its rich and intricate carving, unsurpassed in America, as well as in the bold simplicity of its design. The very situation of the mansion has unusual distinction. It stands well off the main highway, on a broad point of land jutting out into the river, and is reached by a long avenue lined with trees. This splendid approach is terminated by a group of five buildings: the mansion house, rising two stories above a stone basement and crowned by a hipped roof with balustraded deck, at the left and right two small outbuildings in the style of the main house, enclosing a forecourt hedged with box, and again at each side of the approach, two stables, simple in character and harmonious in color, the whole making an effect of feudal grandeur seldom equalled in the colonies. The mansion is characterized by massive, Tuscan doorways with arched fanlights, among the earliest in America, by rich Palladian windows, and vast, arched chimney stacks. The walls of pale yellow stucco are framed by rustic blocks of red moulded brick at the corners.

Although rich in detail and ornament, the house is simple in plan. A great hall with a magnificent Doric cornice, reminiscent of the one in Independence Hall, extends through the lower floor and opens upon the garden and river front. To the right, and occupying the full width of the house, is the parlor, entered by two balancing, pedimented doorways. In the center of the opposite wall is the great chimney-breast, framed by a richly carved fret and supported by brackets carved with pierced leaves in the "French taste" characteristic of the time. To the left and right of the fireplaces are two simulated doorways, balancing those across the room. The dining room is placed at the left of the hall, toward the garden. Here the panelling, which embraces the

entire side occupied by the chimney-breast, is simple and without carving.

Behind the dining room, to the left of the entrance door, a handsome stairway ascends to the second floor. Another broad hall, with decoration in the Ionic order, and terminated by a triple Palladian window at each end, occupies the space above the lower one. Upon the right are two small bedrooms, with a plain, cove cornice and fireplaces across one corner of the room. To the left, above the dining room, and overlooking the river, is the great chamber, the room with the most elaborate carving of any in the house. The overmantel is handsomely decorated with rocaille ornament in bold relief, and at either side are cupboards in elaborate tabernacle frames.

In July, 1926, Mount Pleasant was opened, completely furnished in the luxurious style of the period. Some of the finest furniture from the hands of Philadelphia cabinet makers is assembled here, along with silver from the local silversmiths. Old damasks and prints hang at the windows, and rugs used at the period were purchased in the Orient especially for Mount Pleasant, where they form a beautiful and most unusual feature. The restoration has included also the gardens. Beautifully terraced, on the old lines, they slope toward the river and one may now glimpse in its entirety the estate of a country gentleman of 1762.

A last potential link in the "chain" is Solitude, built at the close of the Revolution by John Penn. He arrived in Philadelphia shortly after the signing of peace, as soon as it was prudent for an English gentleman with a strain of noble blood in his veins to appear in the new republic. Ostensibly he came to rescue the family proprietary interests, in reality he unwittingly established a new style in architecture and decoration. After a bitter struggle the Adam style had victoriously superseded the Chippendale in England by the year 1762, but the echo of this, as was usual in the colonies, was delayed a full twenty-five years by the war waged against the mother country. It was not until John Penn came to Philadelphia in 1784 and built himself a house in the fashion current in England that the new style was introduced into America.

Solitude is simple enough on the exterior; a square, grey stucco house two stories in height with no ornament except a porticoed entrance door. In contrast to most of the mansions on the Schuylkill, it is small, only twenty-six by twenty-six feet, "just large enough for a bachellor and cosy enough for a poet," as an old writer has said. Once inside, however, the visitor is amazed at the richness and delicacy of detail. Fronting the river, on the ground floor, is a great parlor extending the whole width of the mansion and containing one of the finest ceilings in America. It is in the delicate style made famous by the brothers Adam, with slender, classical motives of medallions, garlands, candelabra and trophies. Three other rooms contain ceilings no less fine, something unexampled in any other house. Behind the parlor, across the entire western front of the mansion, is a large hall from which the stairs, (which have an exceptionally beautiful and graceful iron railing), rise to the second story, where are small bedrooms and a library. The latter was John Penn's pride. In its fifteen by fourteen-and-a-half feet he crowded some six hundred volumes—the classics and works in Italian, Spanish and English. The beautiful Sheraton bookcases which housed these treasured volumes are still to be seen in the old room where John Penn used and left them.

After four years of residence at Solitude John Penn returned to England, in 1789. Although he had spent lavishly both money and affection upon his estate he never returned to it. He may, indeed, have regarded the building of so sophisticated a house in so remote a spot largely as a *tour de force* for he wrote, "I gradually altered my scheme to the great increase of the expense it put me to. I might in part be actuated in this by a motive now grown stronger, the vanity of English taste in furnishing and decorating my house." On his return to England John Penn continued to nourish this passion for architecture by building an elaborate town house in Kensington

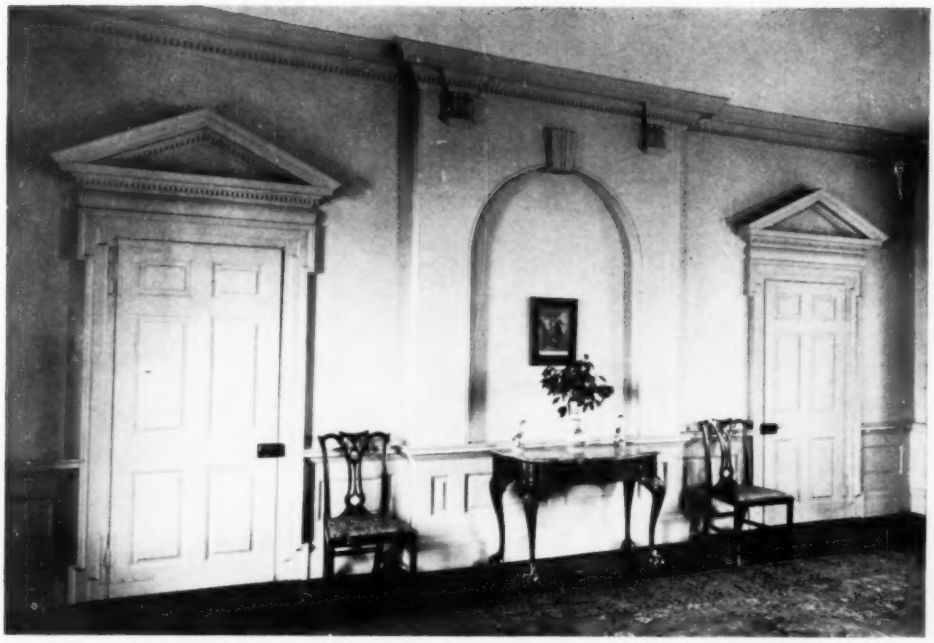
THE RAWLE MANSION (Before 1760)

MOUNT PLEASANT, 1762

The Great Chamber

The Hall

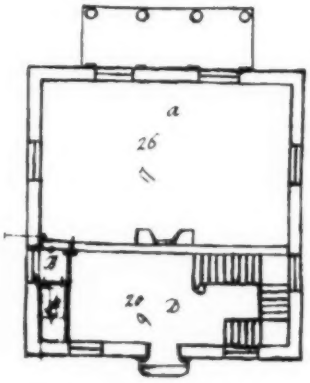
MOUNT PLEASANT—INTERIOR



The Parlor—Wall Toward the Hall

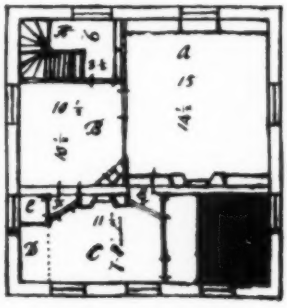
The Parlor—General View

Ground-floor of The Solitude near Philadelphia - 12 high.



A. Parlour, entered into thro a folding door, glass door entering into the Piazza —
B. Small Entry, divided from the Hall by a green-wrought door —
C. Closet entered from the Entry thro a wooden d° —
D. Hall —

Second Floor of the Solitude near Philadelphia - 10 high

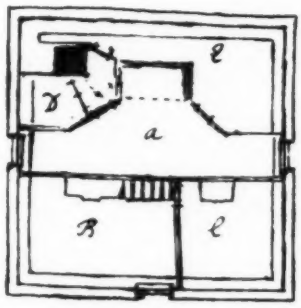


A. Library, entered thro a high 8 glass door, matching the other doors for books and pictures
B. Bed room
C. D°
D. Alcove for a bed
E. Closet
F. G. Small Lobbies or passages between the doors
H. Closet, & Roof of story above

SOLITUDE—PLANS OF FIRST AND SECOND FLOORS

Courtesy of the Pennsylvania Historical Society

Roof-story of the Solitude near Philadelphia - 7 Sept.



A. Best room of this story, with an Alcove bed—

B. Upon a thoroughfare to which both the beds communicate.

C. Room lighted by a glass door, & to contain a servants' bed.

D. c. Two dark closets.

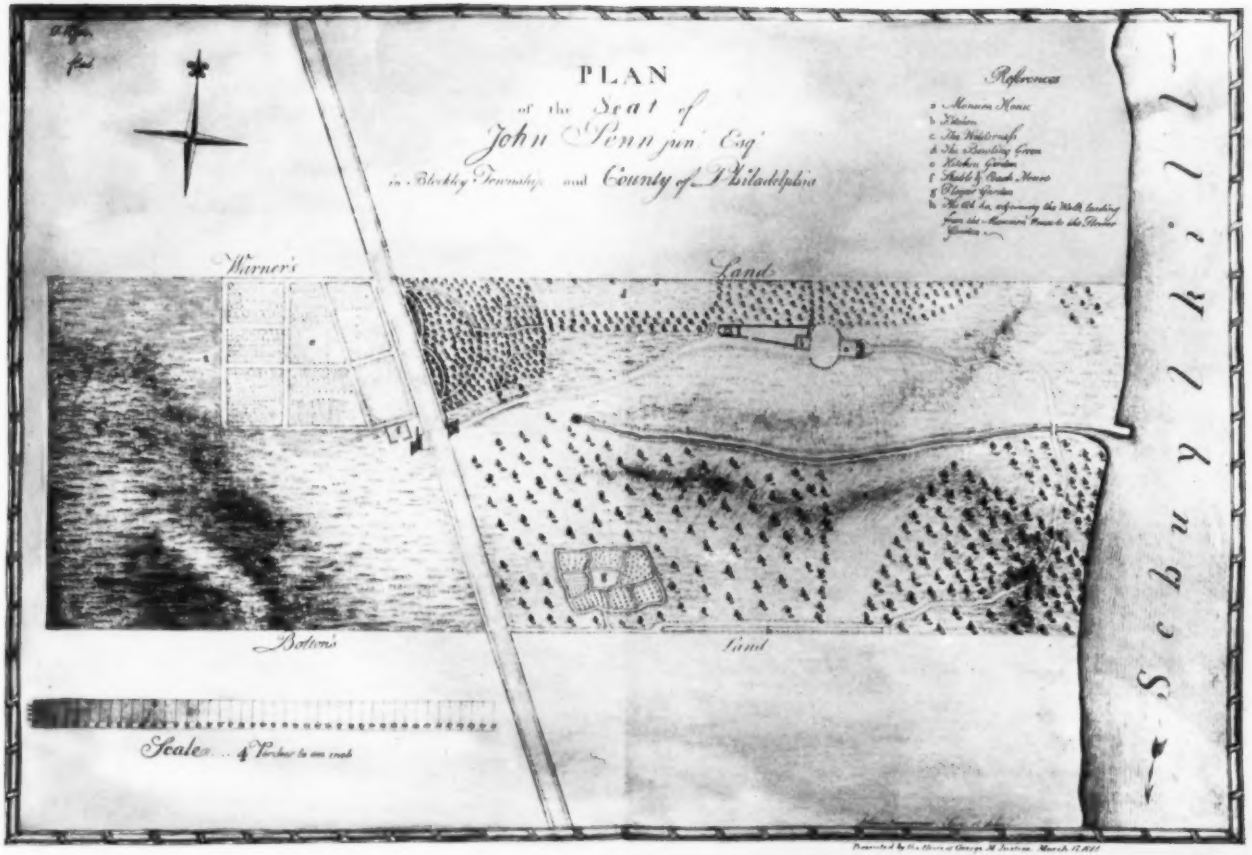
Gardens and erecting a handsome country mansion at Stoke Poges.

The plans of Solitude, drawn by John Penn's own hand, are still preserved in his "Commonplace Book," and are herewith reproduced for the first time. Who was actually responsible for the design of the house and the beautiful ceilings, is not known. Perhaps it may have been the William Tatham of Philadelphia of whom Thornton, architect of the Capitol in Washington, wrote:

"Permit me to mention to you a young Gentleman who is with me here that professes to be perfectly master of his Business as an Architect, being bred to that employment under the celebrated Mr. Robert Adam in England."

Solitude, 1785—The West Doorway

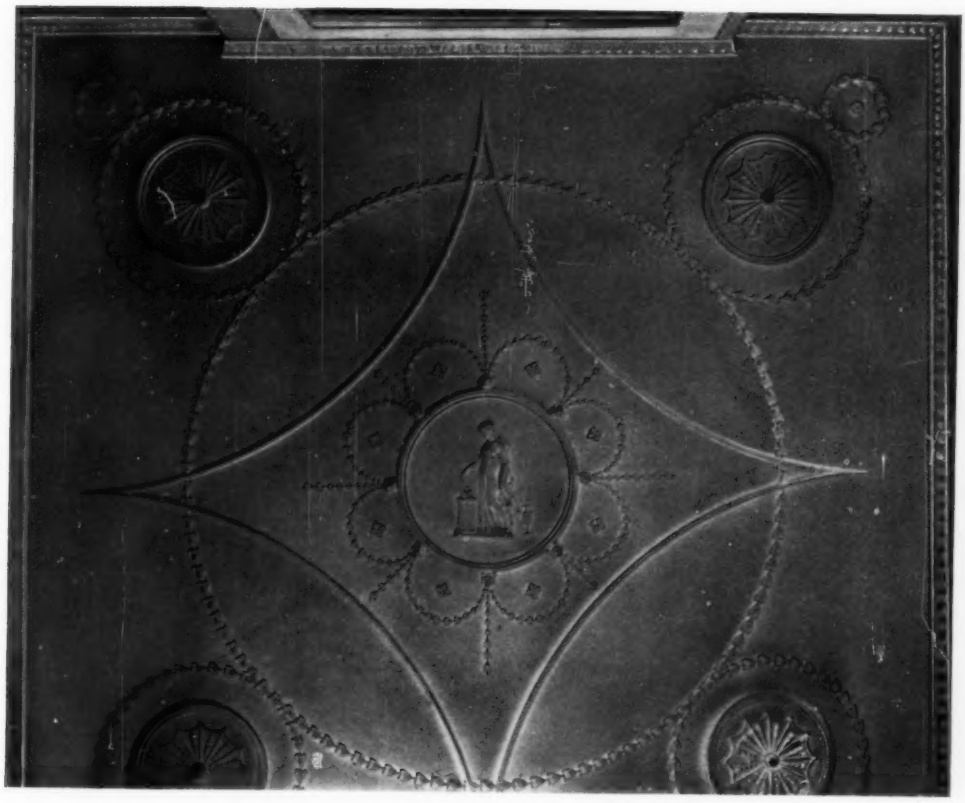
The plan of the estate as a whole, drawn with the greatest care and skill, has also been preserved and has likewise hitherto remained unpublished. It is the most remarkable one of the early history of landscape architecture in America. Influenced by the style



The Architectural Record July, 1927

SOLITUDE—ORIGINAL PLAN OF THE GARDENS

Courtesy of the Pennsylvania Historical Society



SOLITUDE—LIBRARY CEILING.

Courtesy of the Pennsylvania Museum

of "Capability" Brown, who died in 1783, just as Solitude was being begun, it offers a diversity of prospects and vistas, in the framing of which, at the northeast corner of the property, is one of the "clumps" for which Brown has been so much praised and reproached.

In common with Brown and in contrast with later detractors of the picturesque school, formality is not wholly banished from the neighborhood of the house. It possessed a circular-ended forecourt, and utility was observed by the thoughtful provisions of bowling green and kitchen garden. The flower garden was distant from the house, reached by a circuitous path which took in as many as possible of the best points of view. For one stretch, where it borders the property, it is flanked by the ha-ha or sunk fence, which, since the time of Bridgeman had been the familiar type of barrier in the English landscape gardens.

No other city in the United States has so fine an heritage or so great an artistic resource as has Philadelphia in these beautiful old houses. By their preservation in Fairmount Park the homes of our forefathers have once more been made to live for us, and as we wander through their spacious rooms we are aware not merely that they represent the evolution of American architecture and decoration for the last two hundred and fifty years, but that in them we find that elusive dignity and harmony and simplicity which the architect of today is seeking to recapture.

East and North Fronts, Centre Square Pump House, Philadelphia (Demolished 1827)
From an old engraving

LATROBE and the CENTRE SQUARE PUMP HOUSE

By

Costen Fitz-Gibbon

In July, 1798, Benjamin Henry Latrobe received the commission to build the Bank of Pennsylvania and, in order to superintend the construction of this important work, he took up his residence in Philadelphia. His reputation as an able engineer was well known and, not long after his arrival, he was engaged to plan the City's first municipal water supply and to install the requisite plant.

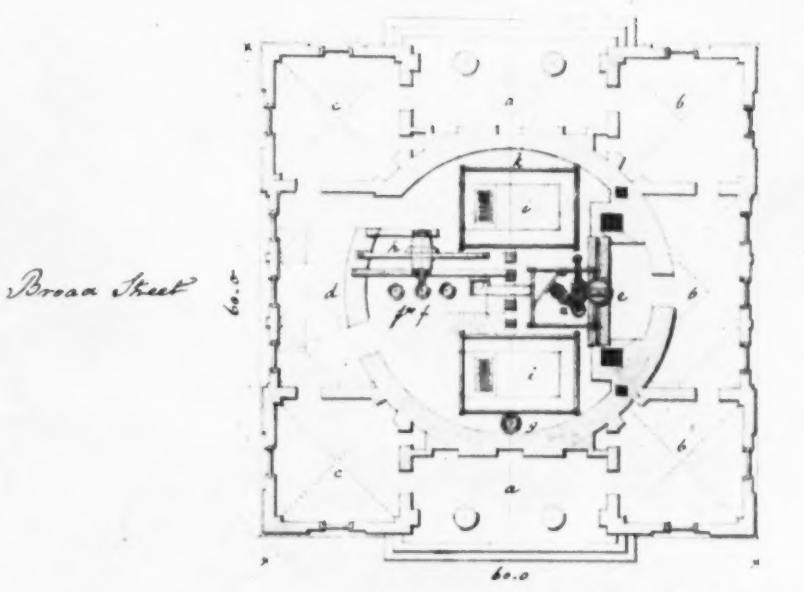
His plan included two pumping stations. At one of them, on the banks of the Schuylkill, the water was pumped from the river into a brick tunnel which conveyed it to Centre Square. There a second pumping station took the water from the tunnel and pumped it up to elevated tanks or small reservoirs whence it was distributed by wooden pipes to various parts of the city.

Benjamin Henry Latrobe

Courtesy of the Philadelphia Water Bureau

This second or Centre Square pump house, on the site of the present Philadelphia City Hall, was the building of which illustrations are here given. The structure itself was demolished many years ago, but its grace and distinction seem to have strongly impressed the generations that knew it, for a number of paintings and contemporary engravings acquaint us pretty thoroughly with every detail of its appearance. Better still, Latrobe's own drawings and renderings of the pump house have been preserved by the Pennsylvania Historical Society and, through the courtesy of the Society, they are here reproduced. The elevation, section and plan, with marginal annotations in Latrobe's own handwriting, are taken from a portfolio which Latrobe prepared for his son as a record of some of the work he had done since his removal to America. They are not the drawings used at the time the pump house was built, but as they are from Latrobe's own hand and made by him expressly for record purposes there can be no question of their correctness.

The pump house was finished in 1801. The exterior was of white marble. Were it not for this fact, and some consequent memoranda in the city records relative to the cost of the material, we should be almost without any contemporary official notice of the architecture or of Latrobe's ability as an architect. To the City Fathers he was Latrobe the *engineer* who was giving them a supply of water. Officially they were much more interested


Second, or Center Engine house No. II
Market Street
Broad Street
60.0
60.0
References.
a, Portico's
b. Water-office of the City
c. Engine keeper's apartments.
d. Stairs to the Coal Cellar.
e. Cylinder, 2f. 8I. diameter.
f. Pumps. NB. The pumps ought to stand as in No. I.
f*. Ascending Main 1f. 6I. diam:
g. Descending Main 3"
h. Fly wheel.
i. Boilers.
k. Situation of a descending Main for the West part of the City when built

Plan of the Ground Story

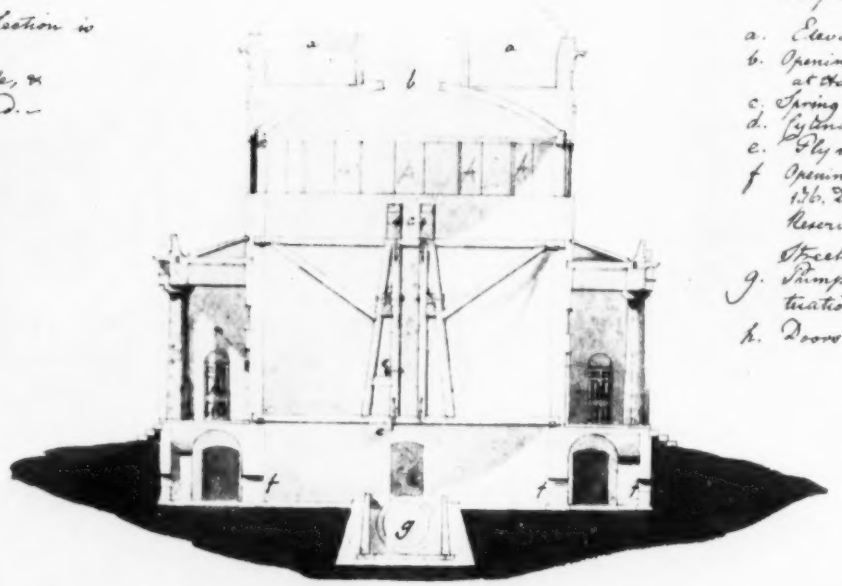
The Architectural Record — July, 1927

Courtesy of Pennsylvania Historical Society

Plan, Centre Square Pump House, Philadelphia (Reproduction from Latrobe's drawings)
Benjamin Henry Latrobe, Architect

N. B
The Timber is the Section is tinted yellow.
The Marble purple, &
The Brickwork red.—

References.
a. Elevated Reservoir
b. Opening in the Dome, to get at the Reservoir.
c. Spring beams & Blockings.
d. Cylinder beams.
e. Fly wheel frame.
f Openings through which the Pipes 36. Diameter descendong from the Reservoir, passes to supply the Street pipes.
g. Pumps Chamber,— showing the situation of the long Tunnel.
h. Doors of the Water-office.—

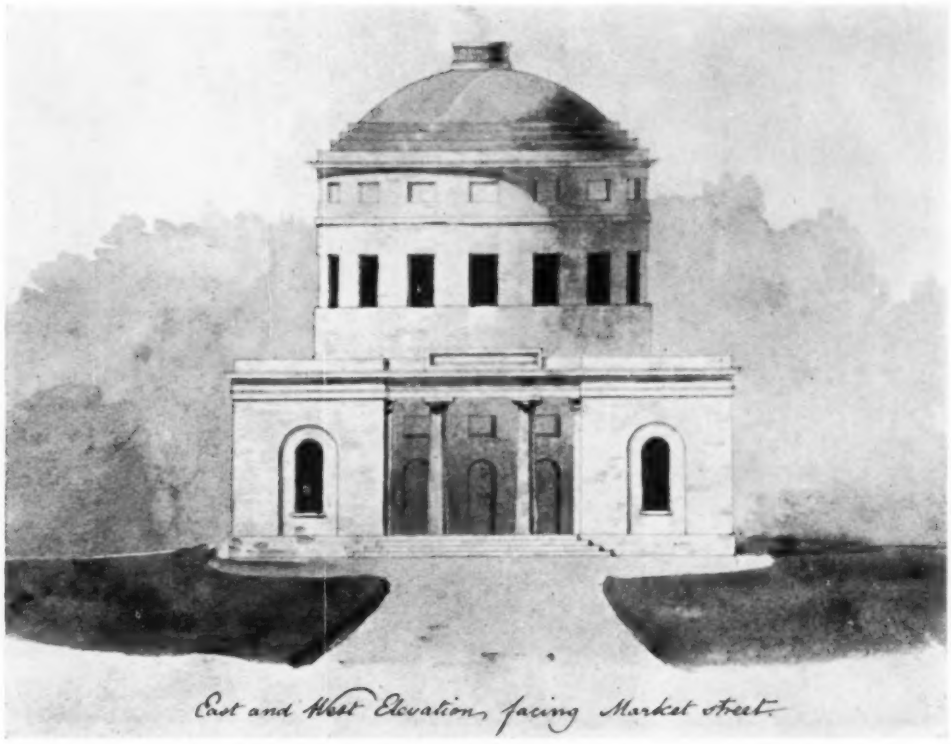


Section from West to East, looking Northward.

The Architectural Record July, 1927

Section, Centre Square Pump House, Philadelphia (Reproduction from Latrobe's drawing)
Benjamin Henry Latrobe, Architect

Courtesy of Pennsylvania Historical Society



Centre Square Pump House, Philadelphia (Reproduction from Latrobe's rendering)
Benjamin Henry Latrobe, Architect
Courtesy of Pennsylvania Historical Society

in pipes and the Bolton & Watt type of engines being made by Nicholas Roosevelt at his Soho Works, near Newark, than they were in porticoes, columns or entablatures. Officially they were willing to concede that the structure should be of decent appearance, as it occupied a prominent site, but that was all.

The building was sixty feet square with offices at the corners; the columns of the porticoes were monoliths sixteen feet high. As will be seen by the section, the tanks occupied the upper part of the rotunda which gave them height enough to force the water by gravity to any house in the city of that period. It is mightily interesting, of course, to note that the Centre Square pump house is a pure example of the Graeco-Roman style with which Latrobe was thoroughly imbued, but what is really much more significant to architects of this generation is that he took a purely utilitarian building and, without in the least disguising its purpose in either plan or elevation, made of it an object of rare beauty.

The Use of Sculpture in City and Park Decoration

From an Address Before the American Society of Landscape Architects by John Gregory, A.N.A., Sculptor

I AM LIMITING my remarks to a critical consideration of *"The Use of Sculpture in Central Park,"* and if I am over-aggressive in my criticism you must pardon it as the expressions of one who is an executor of details rather than a creator of plans.

My criticism is of the placing of the statuary, and particularly, of the placing of it on the grass. In fact, I accuse my profession of neglecting to observe the Park Department's most important ordinance, *"Keep Off the Grass."*

* * *

There are many examples of inappropriate setting of statues, there are pedestals weighing tons placed on the grass, pedestals placed high up on rocks, and pedestals placed where there should be traffic controls. These pedestals with their statues are out of harmony with the rustic character of their surroundings and both the statues and the landscape suffer from the arrangement. Sculpture should not be mixed with natural scenery—it exists on another plane. It is, however, a suitable embellishment of gardens, which are conventions of nature, as is sculpture.

The use of sculpture in parks makes a difficult problem that can only be solved by the use of architecture, which serves as a transition from nature to the abstract detachment of art.

Architecture which concerns itself with definite forms and less with spiritual and mystical matters can be combined more harmoniously with nature and serves as a link between it and the abstract arts, particularly sculpture which is the furtherest removed from actuality, needing above all the harmonizing help of architecture in its placing.

It has been said figuratively that "Sculpture is crystallized poetry, the music of the spheres made visible." Practically, it is a means for recording moods which are fleeting, for storing up visions of a poetical nature and for making concrete, dreams and aspirations.

It is never simple representation, the added quality of spirit is necessary to make it a work of art.

Its function is to record that which cannot be expressed in words.

Its technique is involved and scientific and the Sculptor who creates a fine work does so by elaborate processes which call for much knowledge and experience... The method or technique varies with each individual and it is this personal expression which carries the statue beyond imitation.

Therefore we may assume that Sculpture is a convention, an abstraction and not in any way an imitation—and that to be seen at its greatest intensity must be set apart from reality.

To this end it must be set in architecture, framed or mounted in a design which makes a gradual transition from living things to this counterfeit presentment.

At all times the placing of a piece of Sculpture in naturalistic surroundings should be led up to by several stages, a gravelled place, in geometrical plan, with steps or curbing, developing into a pedestal.

The more the work is secluded the better, that is, the less it is in competition with the landscape. It is not suggested to bed it in shrubbery, quite the reverse.

It should not be isolated but should be in direct relation with the buildings, colonnades or balustrades.

In other words, the eye should be prepared by gradual stages before being fixed on the statue. In this way the

mind of the beholder is focussed on the artist's intention and is relieved of the critical comparison imposed by the impingement of nature.

* * *

In a Park of the type of Central Park there are few sites suitable for works of a monumental character. With the exception of the Mall there is no area arranged to give a suitable setting. The Mall planned with this intention has been neglected and in some ways the intention was miscarried. The statues of the Poets at the South End are mounted on clumsy pedestals and are placed in the meadow rather than on the Mall itself.

These statues generally looked down on are not in themselves bad and in better surroundings would be creditable monuments.

The placing of their pedestals on the turf gives them an unsubstantial look and they appear to be entirely outside the architectural development.

A further illustration of this isolation is to be seen in that noble statue of J. Q. A. Ward, the "New Englander" commemorating the landing of the Pilgrims. It is placed on the top of a small hill at Seventy-second Street near Fifth Avenue, evidently with the intention of accentuating the qualities of alertness and eager action which the artist desired to express, yet this is not accomplished because while the figure surveys the surrounding country from his position of vantage, he does so—from the top of a pedestal. This arrangement would not be improved by removing the pedestal, it would be made even worse, for the reason that there is no relation between real lakes, grass and trees and a bronze effigy. The mind cannot span the gap and registers a bronze man in a real landscape, or the incorporation of a real landscape in a work of art. As the statue stands, the mind is distracted by the lake in the background, the trees in the foreground and the rustic surroundings. And from the other point of view the landscape is disturbed by this incongruous shape on top of the hill.

The solution of the problem would be to move the statue to an area in which nature was controlled and in which the beholder could *imagine* the scene from which this spirited character was taken. Place him in a niche or against the walls of the Metropolitan Museum and he will dominate the scene, the adventures of the Pilgrim Fathers will be brought to our minds .

On the other hand, the placing of the Seventh Regiment Memorial to a Civil War Soldier is more fortunate. About the same amount of material is used and the arrangement of figure and pedestal is the same. The saving grace is the small plaza surrounding the monument and the well designed ramps leading up to it. The Park benches stretching away on each side of the Drive which the statue faces are perhaps harmonizing factors.

* * *

In brief, if any modification is to be made in the Park plan with an eye to progress and perfection it is to be hoped that certain areas will be laid out as gardens, geometrically with hedges and gravel paths, colonnades and walls, flowers and formal trees, and in these can be placed our statues in order and dignity.

I hope it will be possible to make beautiful gardens in the Park which will be suitable settings for sculpture, to which some of the present statues can be removed and in which can be placed the notable works of our own time.

These gardens would serve a twofold purpose, the first, of inspiring by the beauty of their design and decoration, the second, of educating the public in the characters of their national heroes and myths, particularly of educating children who respond to plastic impressions more readily than the spoken word.

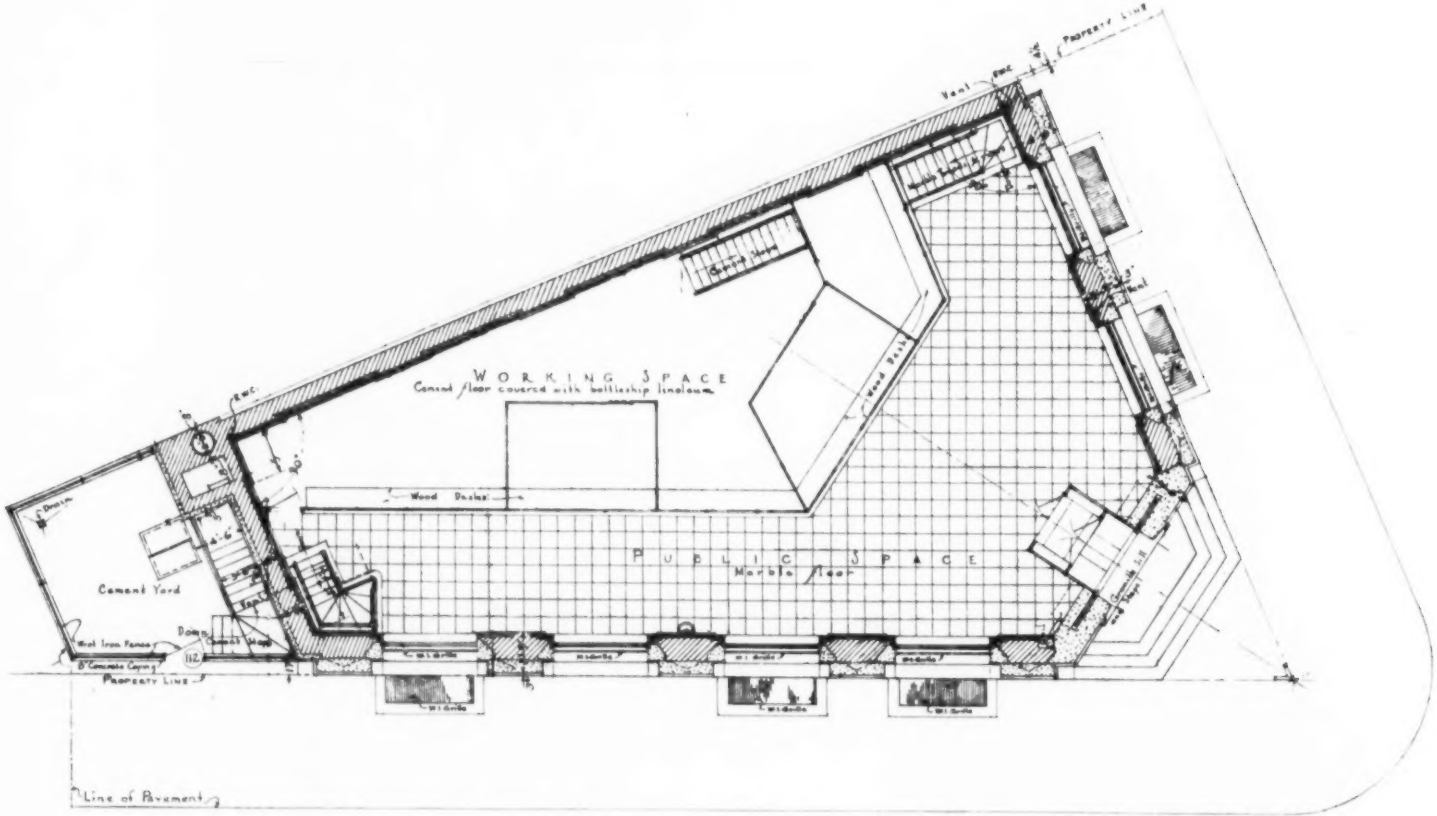
It is not unreasonable to suggest change in the Constitution of the Park. The Constitution of the United States has suffered amendment.

If the Park *must* stay as it is—a souvenir of unreclaimed Manhattan Island—it is to be hoped that the worst examples of misplaced statuary will be removed to the inside or outside of the Metropolitan Museum, and that in future we sculptors will find proper placing elsewhere for our works.

PORTFOLIO

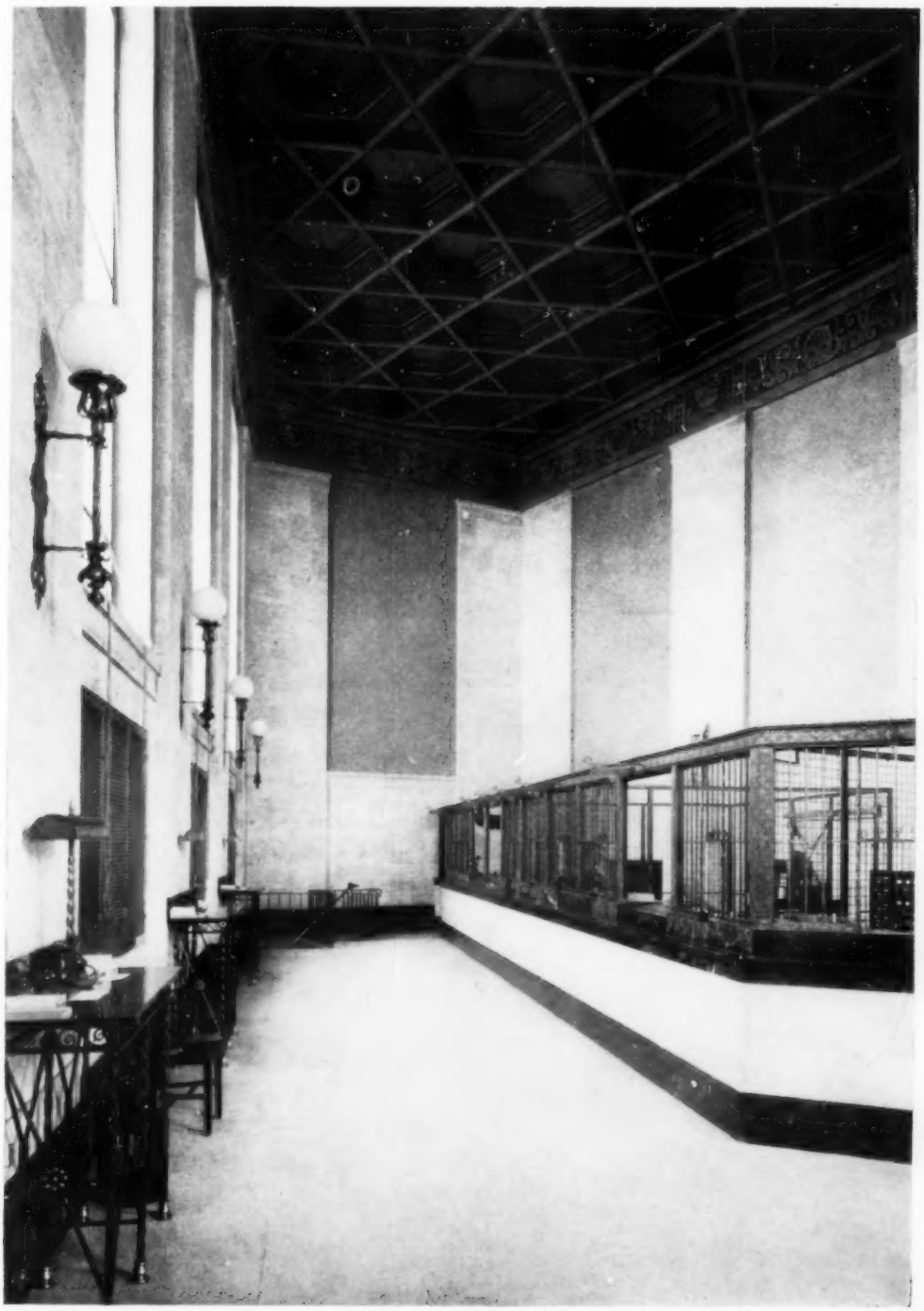
CVRRENT · ARCHITECTVRE

WESTERN SAVING FUND SOCIETY, NORTH PHILADELPHIA BRANCH
Willing, Sims & Talbutt, Architects



· FIRST FLOOR PLAN ·

WESTERN SAVING FUND SOCIETY, NORTH PHILADELPHIA BRANCH
Willing, Sims & Talbutt, Architects



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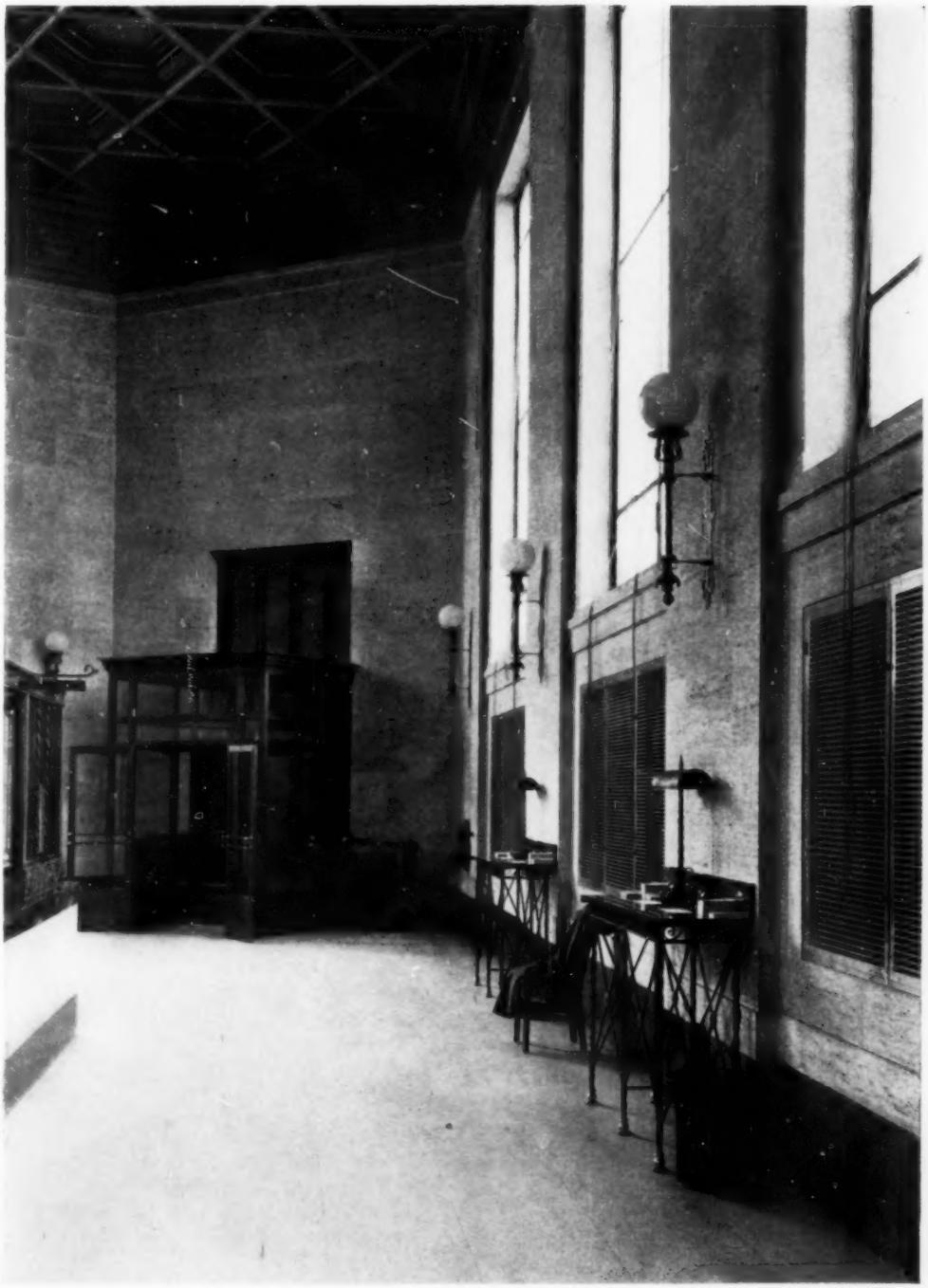


WESTERN SAVING FUND SOCIETY, NORTH PHILADELPHIA BRANCH
Willing, Sims & Talbutt, Architects

CEILING DETAIL, WESTERN SAVING FUND SOCIETY, NORTH PHILADELPHIA BRANCH
Willing, Sims & Talbott, Architects

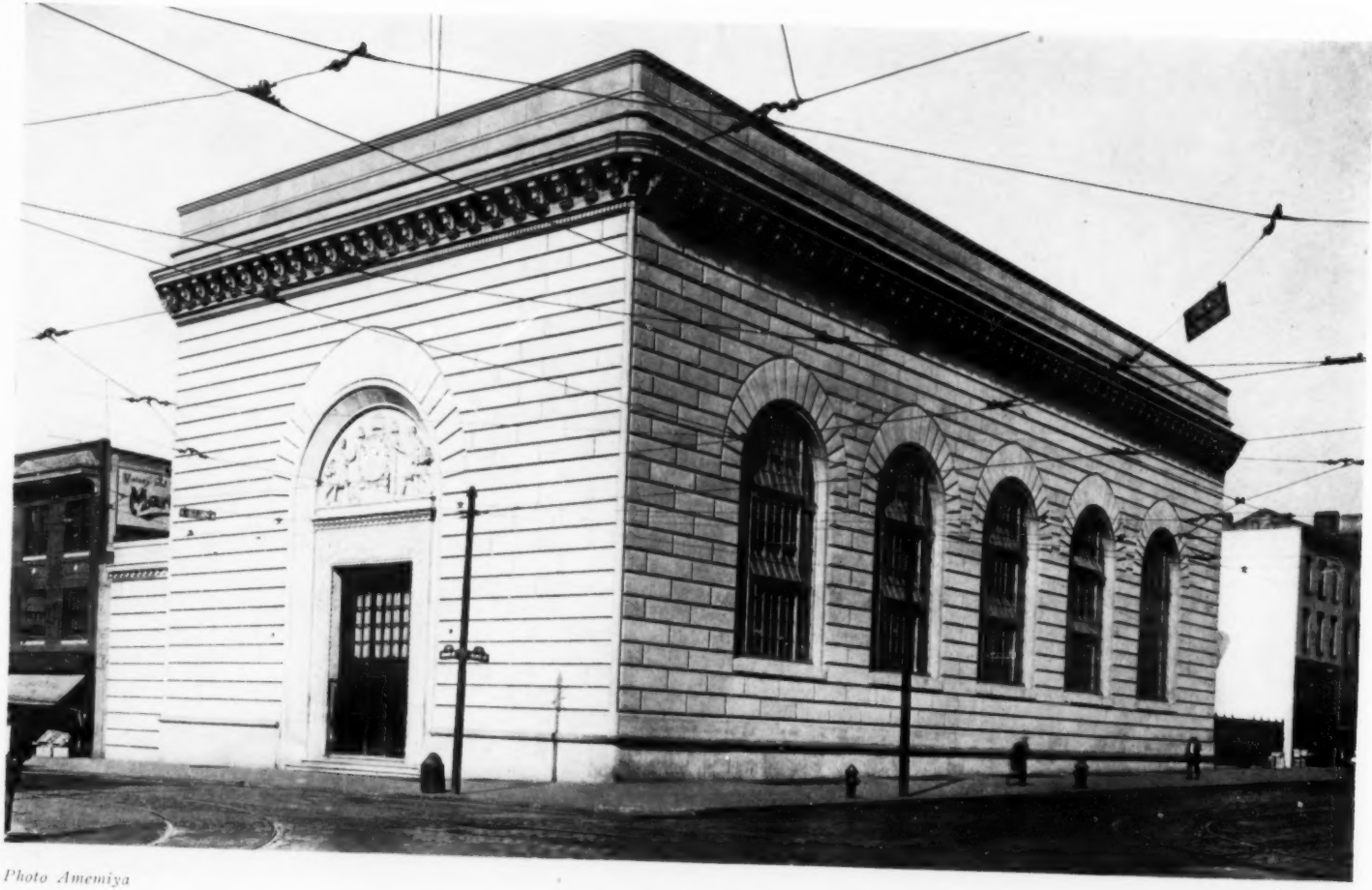
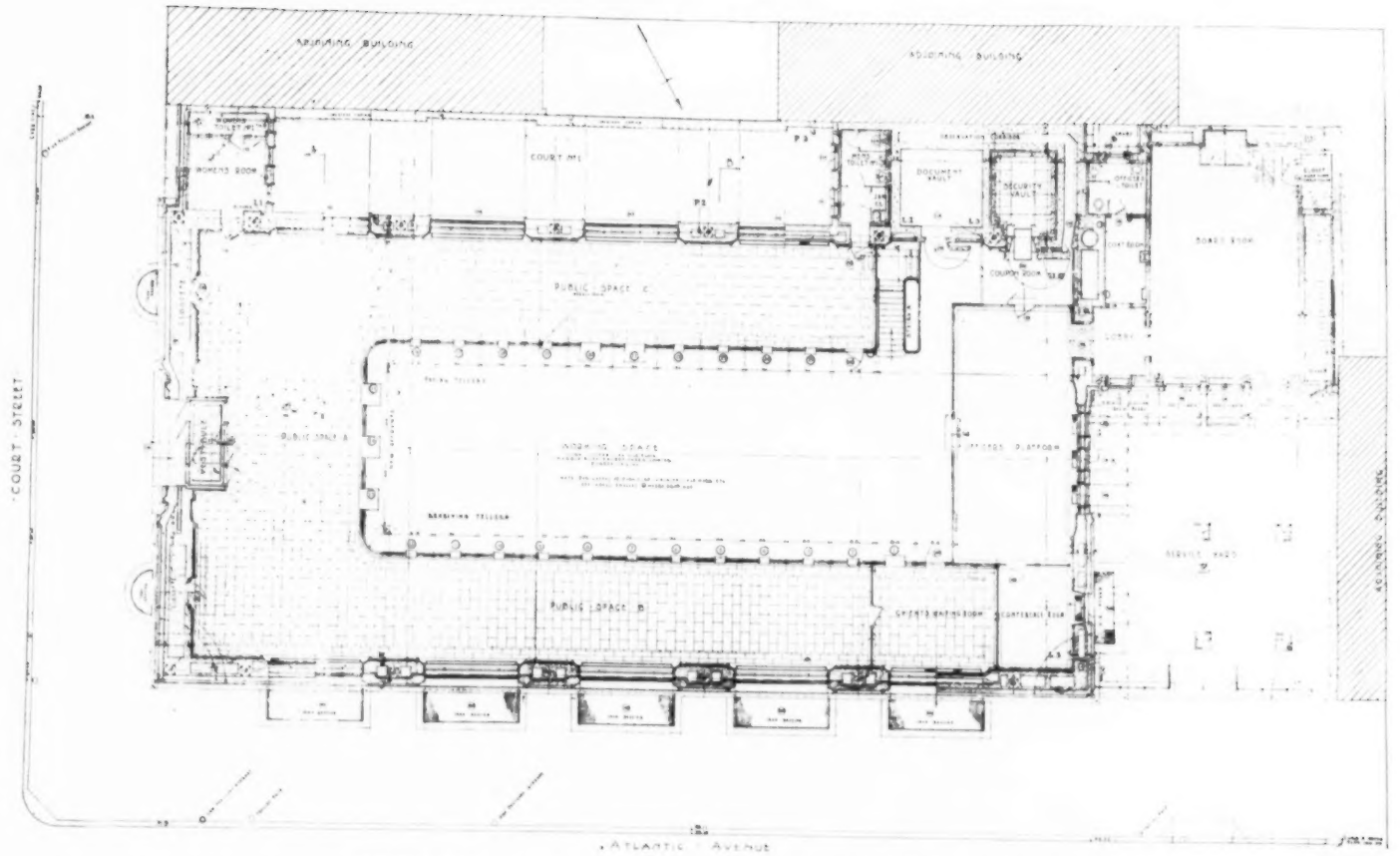


Photo Amemiya

SOUTH BROOKLYN SAVINGS INSTITUTION, BROOKLYN, NEW YORK

McKenzie, Voorhees & Gmelin, Architects



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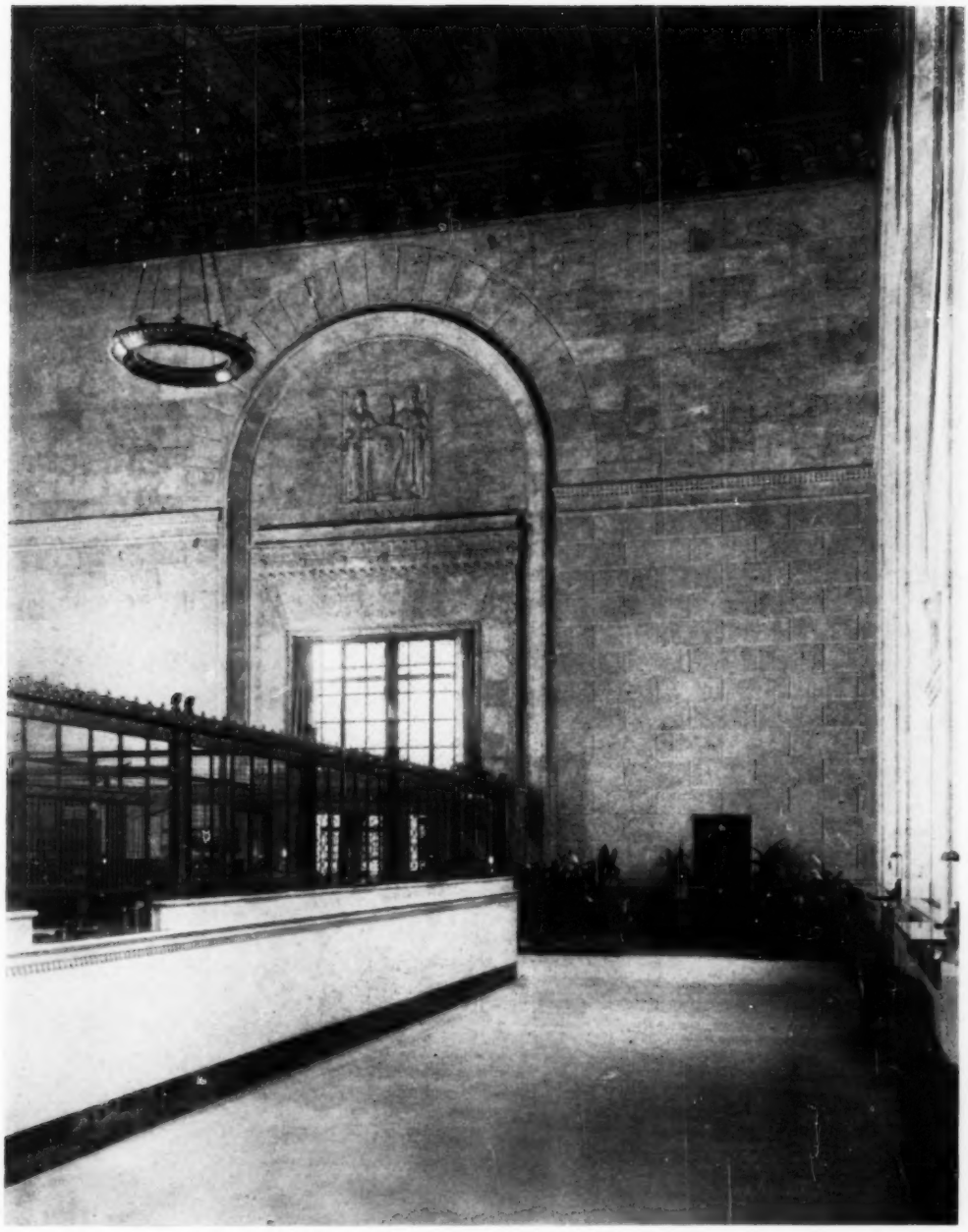
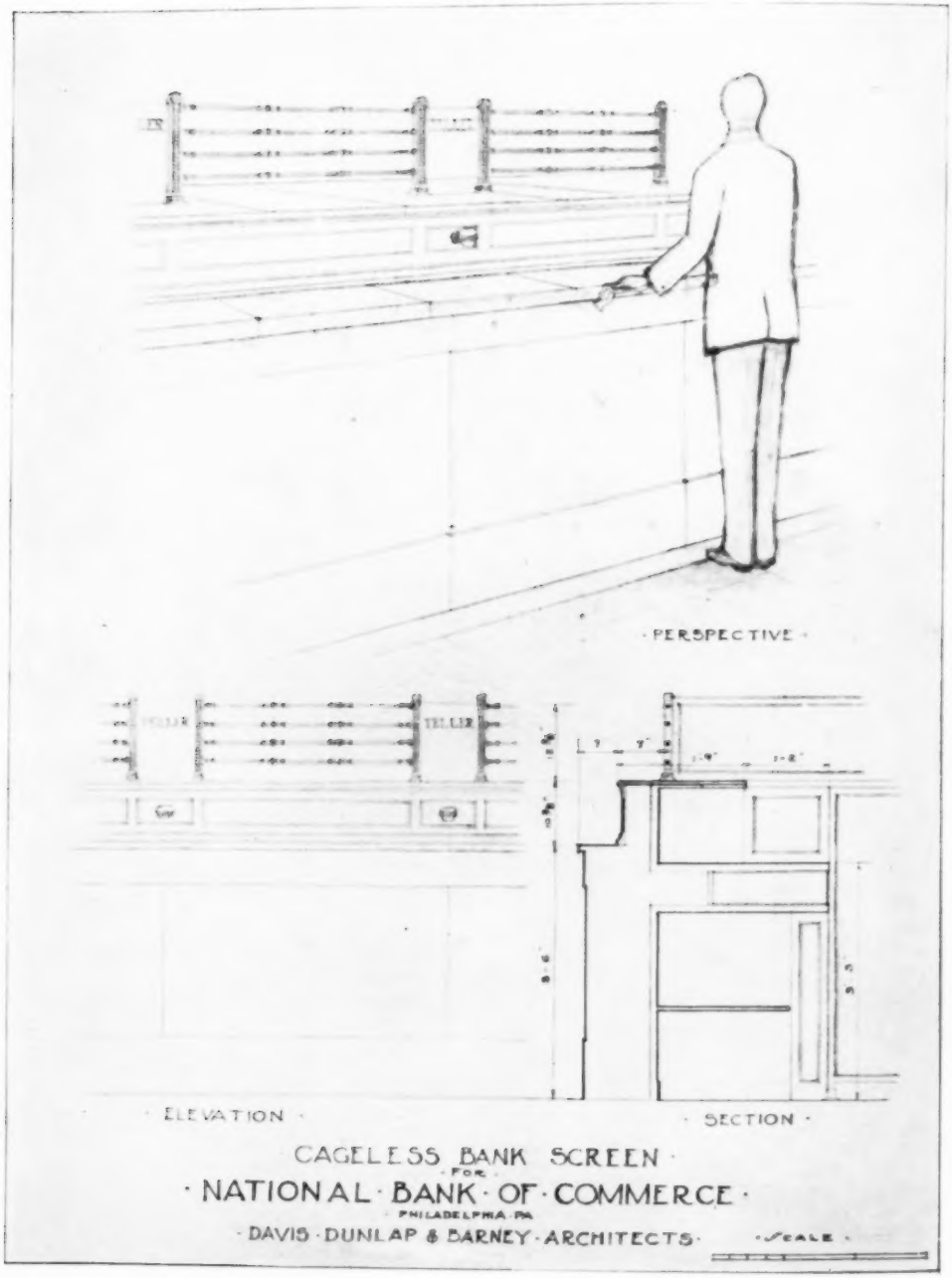


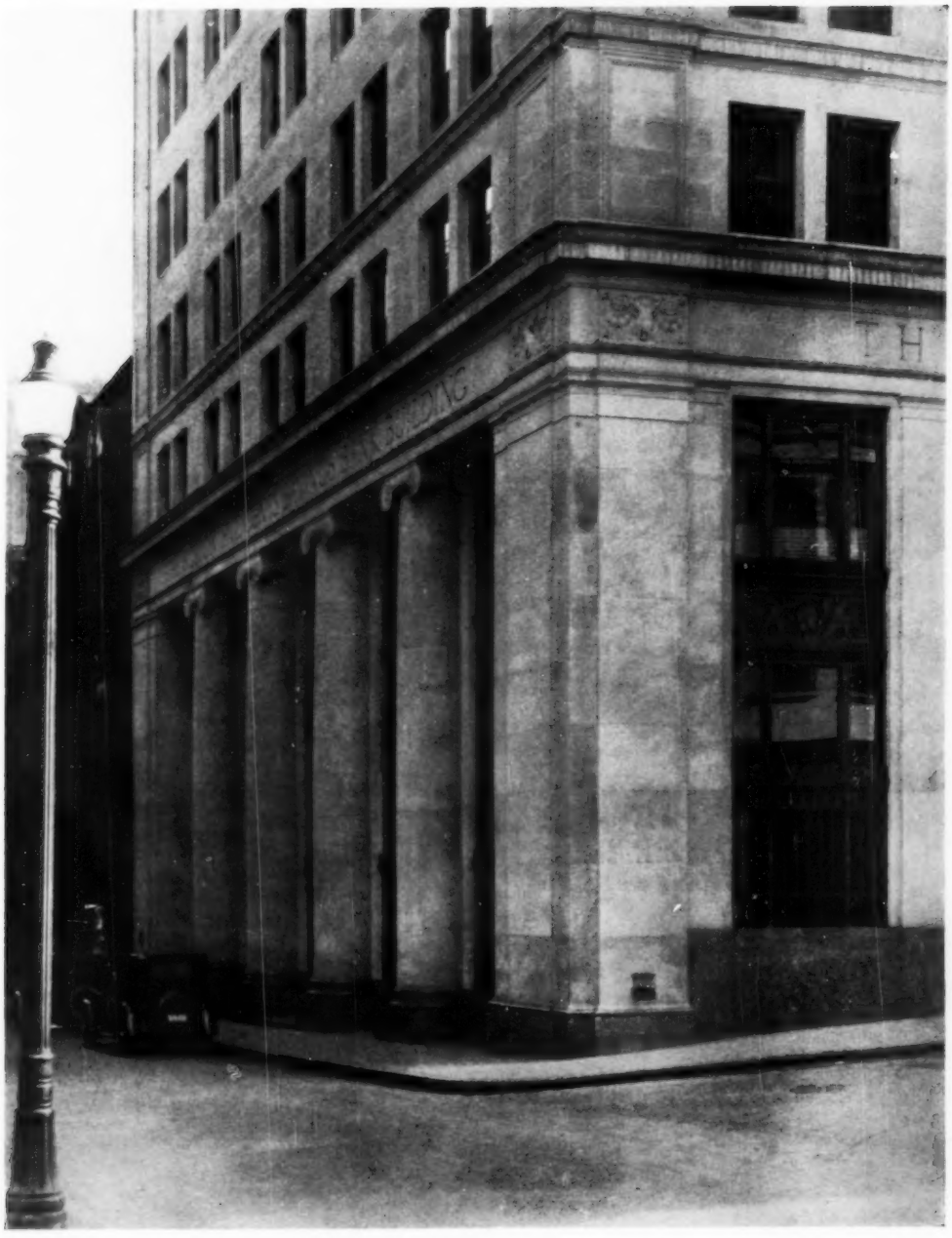
Photo Amemiya

SOUTH BROOKLYN SAVINGS INSTITUTION, BROOKLYN, NEW YORK
McKenzie, Voorhees & Gmelin, Architects

NATIONAL BANK OF COMMERCE, PHILADELPHIA
Davis, Dunlap & Barney, Architects


PERSPECTIVE
TELLER
TELLER
ELEVATION
SECTION
CAGELESS BANK SCREEN
FOR
NATIONAL BANK OF COMMERCE
PHILADELPHIA PA
DAVIS DUNLAP & BARNEY ARCHITECTS
SCALE

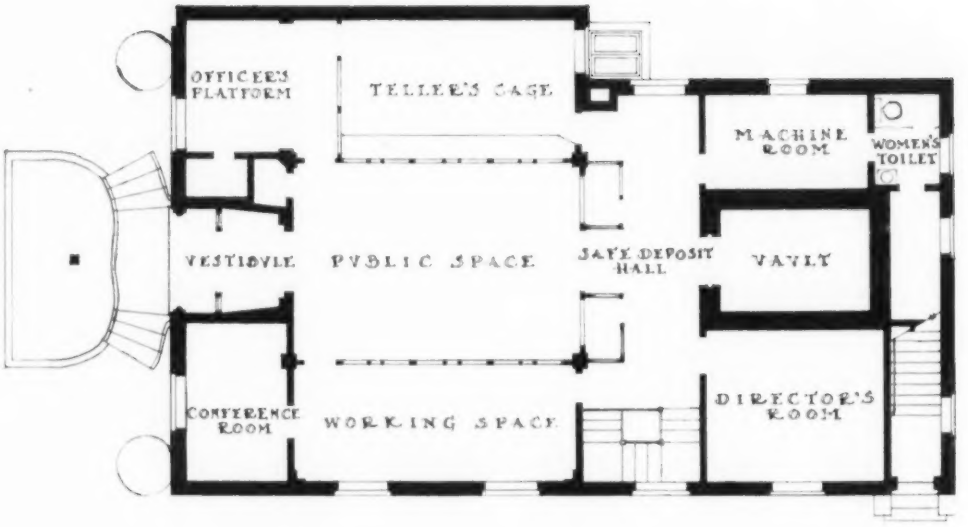
BEVERLY SAVINGS BANK, BEVERLY, MASS.
Kilham, Hopkins & Greeley, Architects



BOSTON FIVE CENTS SAVINGS BANK BUILDING, BOSTON, MASS.
Parker, Thomas & Rice, Architects

Photo S. H. Gottscho

WHEATLEY HILLS NATIONAL BANK, WESTBURY, L. I.
Peabody, Wilson & Brown, Architects

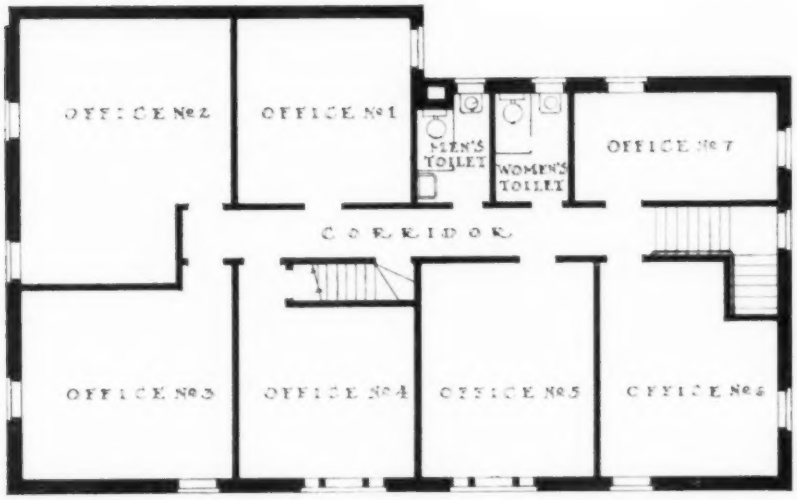


FIRST FLOOR PLAN

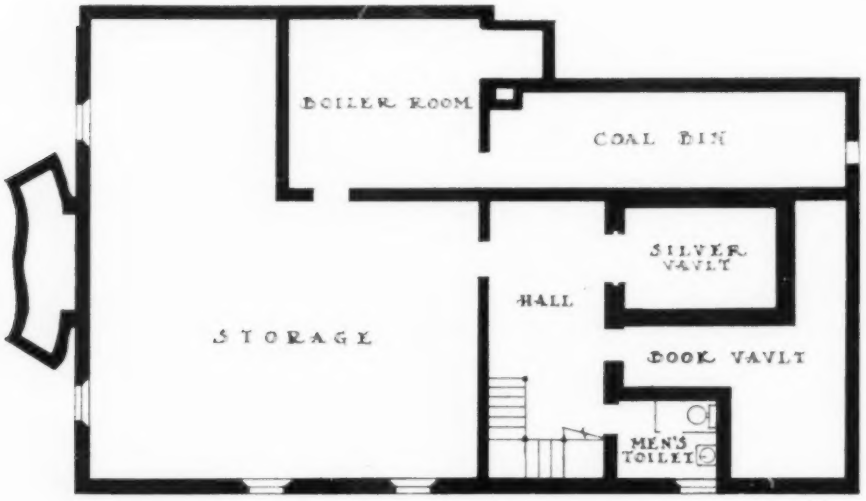
WHEATLEY HILLS NATIONAL BANK, WESTBURY, L. I.
Peabody, Wilson & Brown, Architects

Photo S. H. Gottscho

WHEATLEY HILLS NATIONAL BANK, WESTBURY, L. I.
Peabody, Wilson & Brown, Architects



SECOND FLOOR PLAN



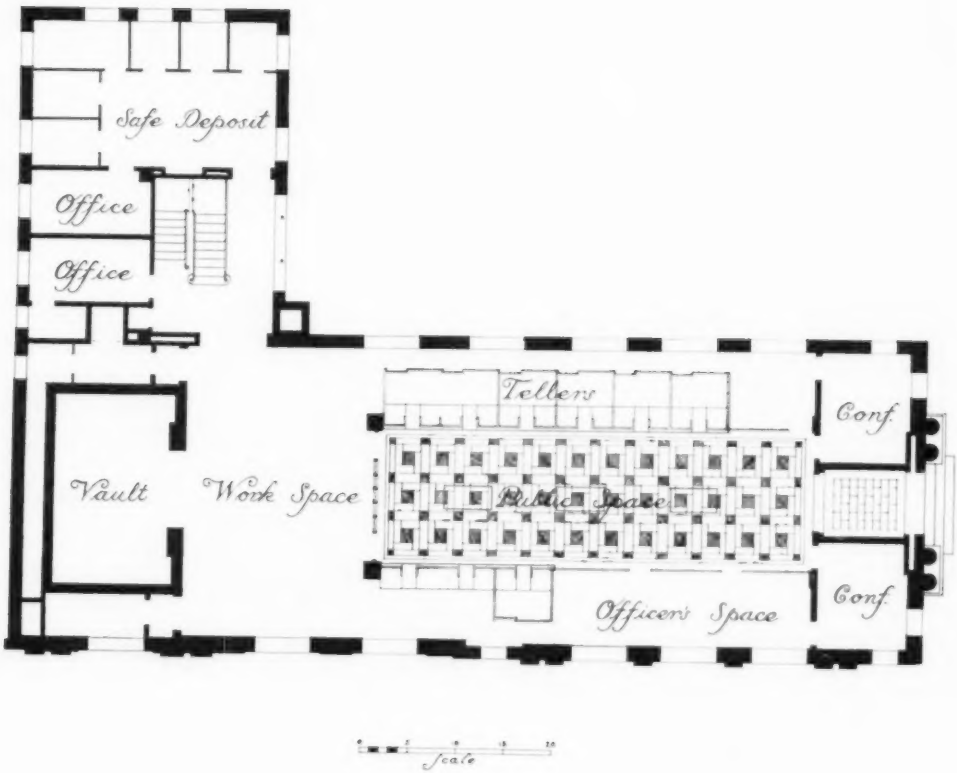
BASEMENT PLAN

WHEATLEY HILLS NATIONAL BANK, WESTBURY, L. I.
Peabody, Wilson & Brown, Architects

Photo S. H. Gottscho

WHEATLEY HILLS NATIONAL BANK, WESTBURY, L. I.
Peabody, Wilson & Brown, Architects

MANAYUNK NATIONAL BANK, PHILADELPHIA, PA.
Davis, Dunlap & Barney, Architects



MANAYUNK NATIONAL BANK, PHILADELPHIA, PA.
Davis, Dunlap & Barney, Architects

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MANAYUNK NATIONAL BANK, PHILADELPHIA, PA.
Davis, Dunlap & Barney, Architects

The FAIRMOUNT WATERWORKS PHILADELPHIA

By

Harold Donaldson Eberlein

THE FAIRMOUNT WATERWORKS, in Philadelphia, are within the field of current interest for two causes. In the first place, the group of buildings on the east bank of the Schuylkill River comes conspicuously into the extensive scheme of revised town-planning and park improvement now being carried out by the City, and the old engine and wheel-houses are in close proximity to the new museum and art gallery nearing completion on the site of the former reservoir. In fact, one might well say that both by historic association and position the old buildings on the river bank are so closely related to the new structure crowning the reservoir hill immediately above them that all of them, new and old together, may be regarded as more or less one composition.

In the second place, the old Fairmount or Schuylkill Waterworks—the establishment was known by both names—afford a distinguished example of early American civil architecture and admirably represent that type of expression that marked the beginning of the nineteenth century, a type of which comparatively few instances remain to us, thanks to the chances of demolition and change that have taken heavy toll of them. It is a type, too, that has recently had a good deal of attention focussed upon it, and hence the illustrations and measured drawings here presented will prove of documentary value.

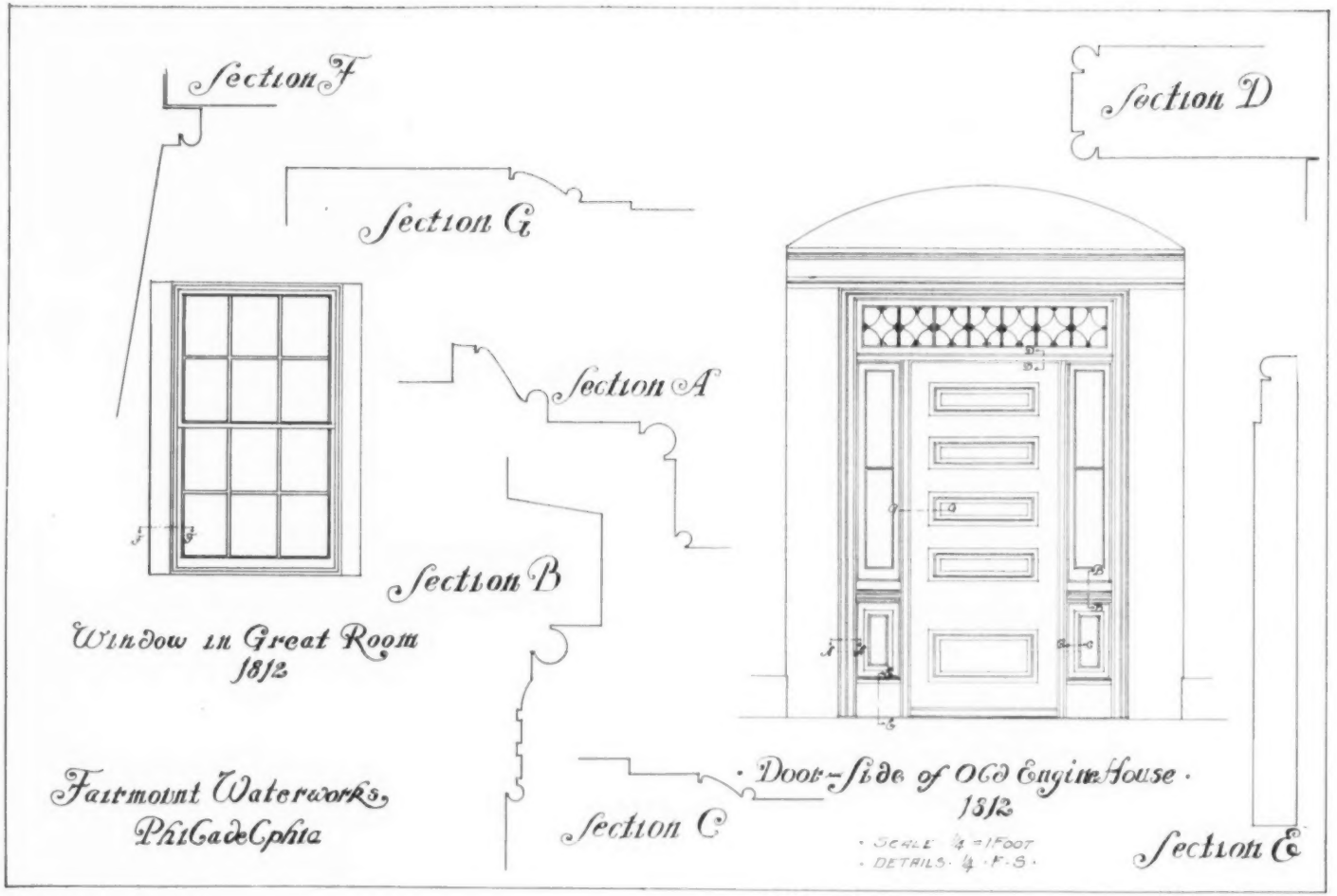
Whatever may be one's preferences or sympathies in the matter of style, the Græco-Roman or Regency manner is of considerable historical import because it was this manner of building of which Latrobe and his pupils, Robert Mills, Strickland, Graff and others, were such capable exponents. It was a style that still retained the human warmth as well as the suave Classic polish of the eighteenth century, in contrast to the archæological frigidity and desiccated exactitudes of the Neo-Grec manner that was soon to overwhelm it and fill the land with temple-fronted houses. The arch and the lighter amenities had not yet been banished before the advancing hosts of the orders. The Græco-Roman spirit, gracefully in-

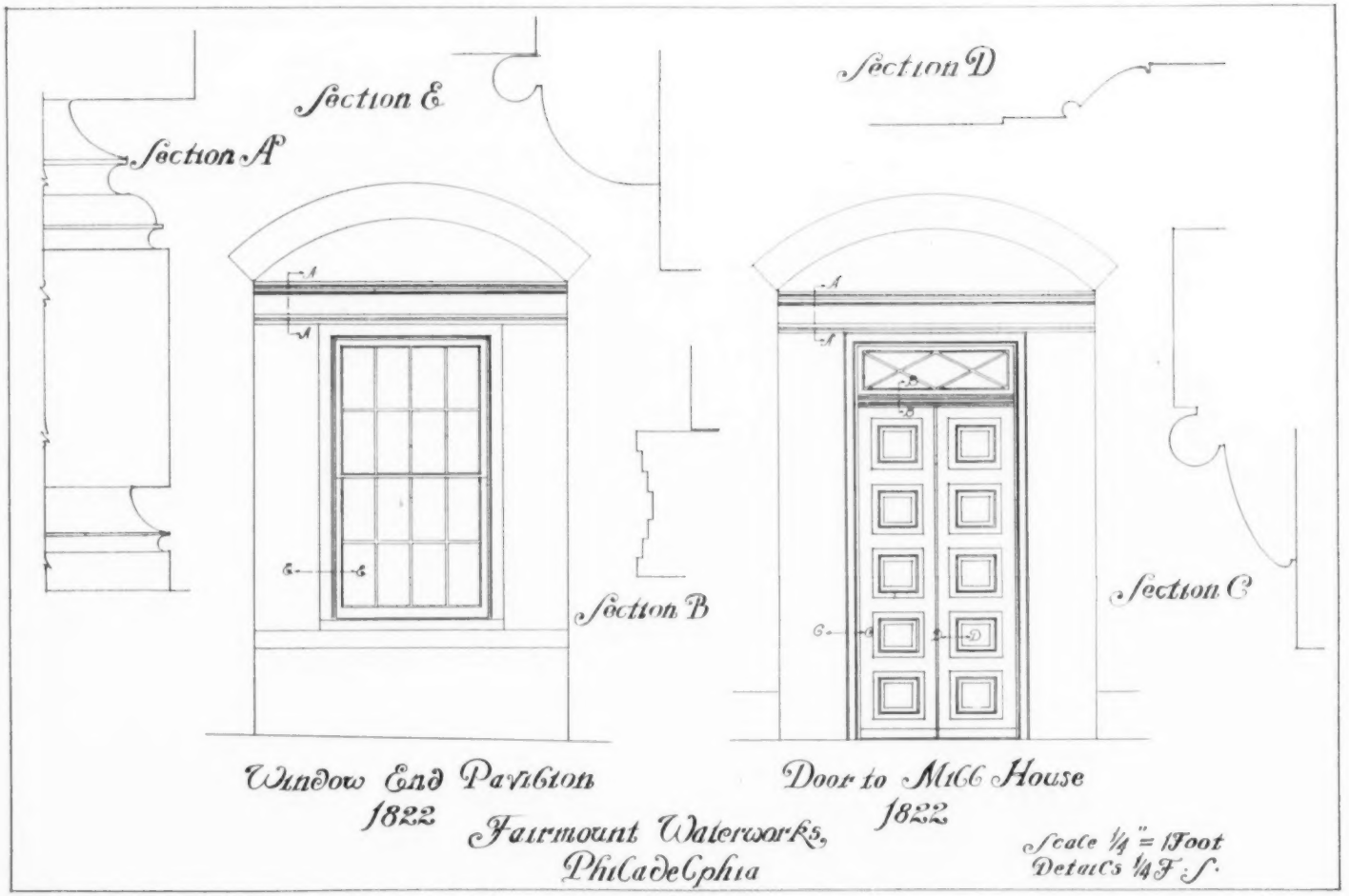
The Architectural Record *July, 1927*

Central Pavilion and Forebay, Fairmount Waterworks, Philadelphia

Courtesy of Philadelphia Water Bureau

General View of the Old Engine House, Fairmount Waterworks, Philadelphia


Section F
Section D
Section G
Section A
Section B
Window in Great Room
1812
Fairmount Waterworks,
Philadelphia
Door-Side of Old Engine House
1812
SCALE ¼ = 1 FOOT
DETAILS ¼ F.S.
Section C
Section E

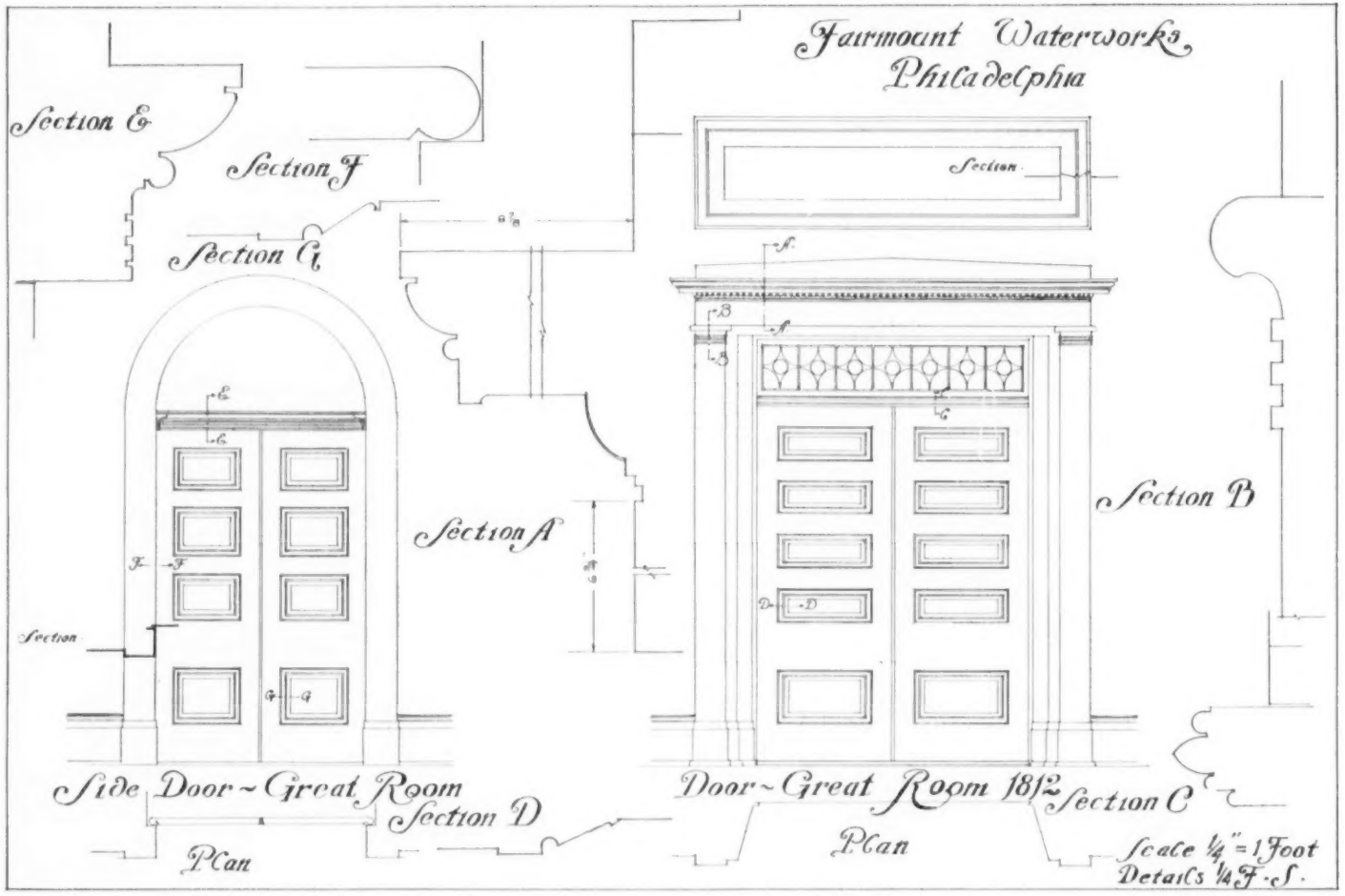


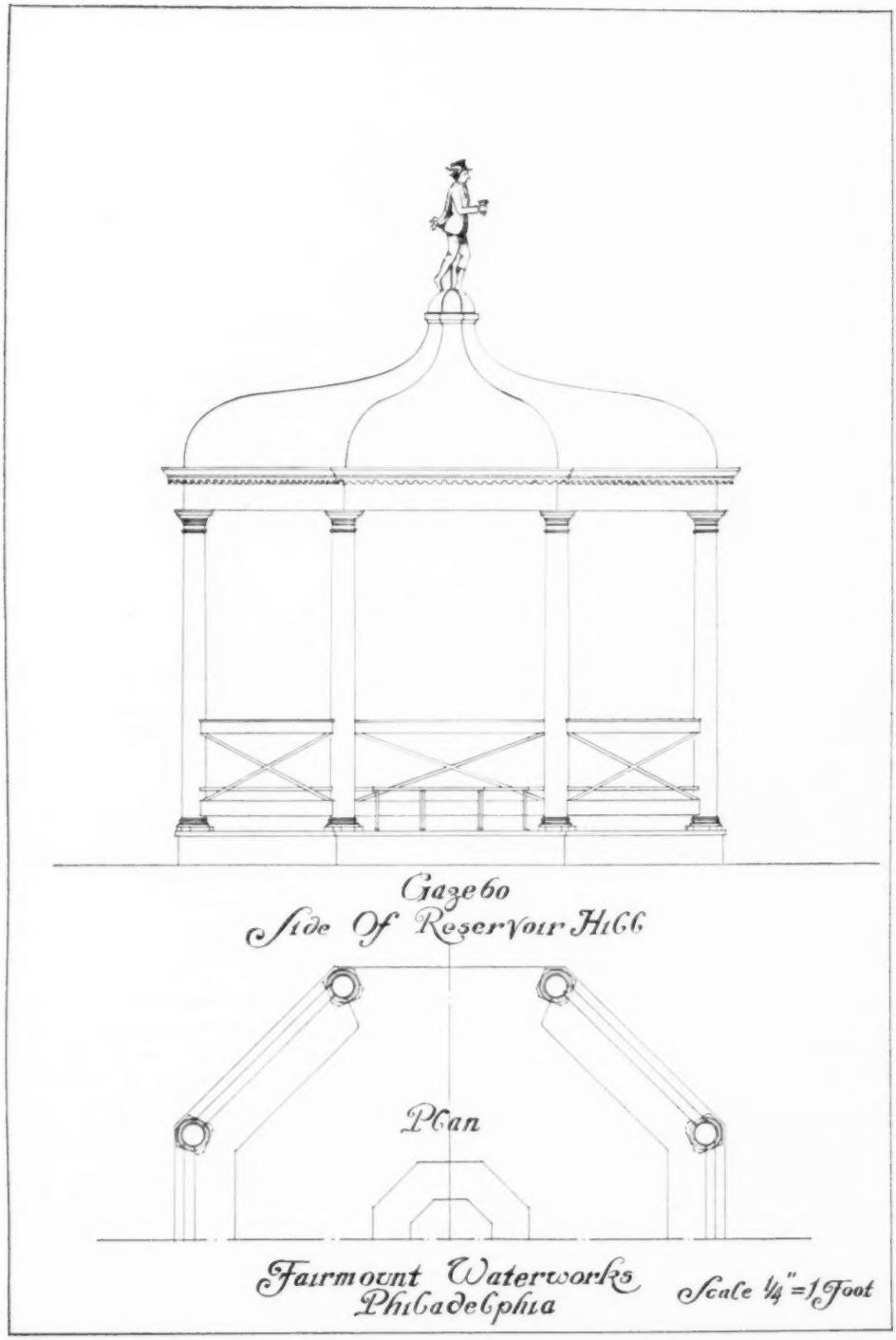
Window End Pavilion
1822

Door to Mill House
1822

Fairmount Waterworks,
Philadelphia

Scale 1/4" = 1 Foot
Details 1/4 F. S.


Fairmount Waterworks
Philadelphia
Section E
Section F
Section G
Section A
Section B
Section C
Section D
Section
Side Door ~ Great Room
Plan
Door ~ Great Room 18½
Plan
Scale ¼" = 1 Foot
Details ¼ F. S.


Gazebo
Side Of Reservoir Hill
Plan
Fairmount Waterworks
Philadelphia
Scale 1/4" = 1 Foot

terpreted as it was by Latrobe and his contemporaries, profoundly affected the trend of public architecture for the first three decades of the nineteenth century, for Latrobe may justly be counted the father of monumental architecture in America.

The chronicle of the Philadelphia Waterworks unfolds a diverting narrative of evolution, and furnishes not a few sidelights upon the public attitude of the period towards architecture. The story, in brief, is this. Towards the end of the eighteenth century it became plainly evident that the people of Philadelphia could no longer depend upon their individual pumps and wells and that there must be installed a municipal supply of water. After somewhat more than the usual amount of preliminary discussion and opposition attending such matters, in 1799 Benjamin Henry Latrobe was commissioned to plan and install the city water system. By the end of 1801 the work was completed. Although at first there was bitter prejudice against the new source of supply, the people soon realized how much more abundant and convenient it was, gave up their antagonism and availed themselves of it.

In fact they used the city water so freely, and population increased so rapidly, that by 1810 the supply had become inadequate and the situation was so acute that some relief was imperative. Accordingly, it was decided to create a great reservoir on the top of Morris Hill, a rocky eminence that rose abruptly from the east bank of the river; thence the water could be piped by gravity to all parts of the city, and the pumping station in Centre Square could cease to operate. An engine house was to be built on the river bank at the foot of the reservoir hill, and in it were to be installed steam driven pumps of much greater power and capacity than those in use at the pumping stations first constructed. These pumps were to force a head of water up the hill through pipes to the top level of the reservoir. Frederick Graff, an engineer trained by Latrobe and superintendent of the old waterworks, was entrusted with this new undertaking. Work was begun in 1812 and completed by 1815. Between those years—probably

The Forebay and East Front, Fairmount Waterworks, Philadelphia
(From an early engraving)

Courtesy of Philadelphia Water Bureau

The FAIRMOUNT WATERWORKS PHILADELPHIA

By

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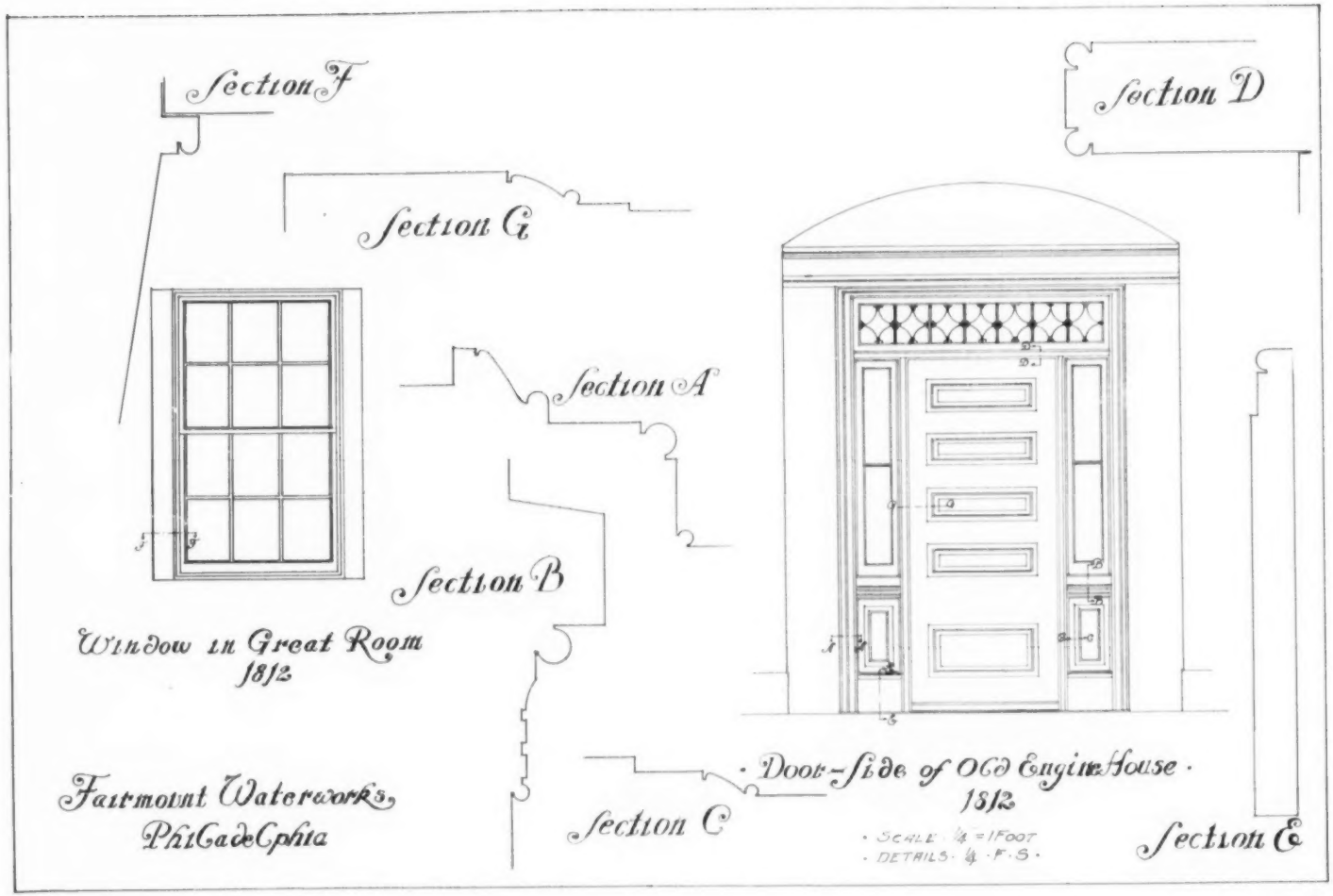
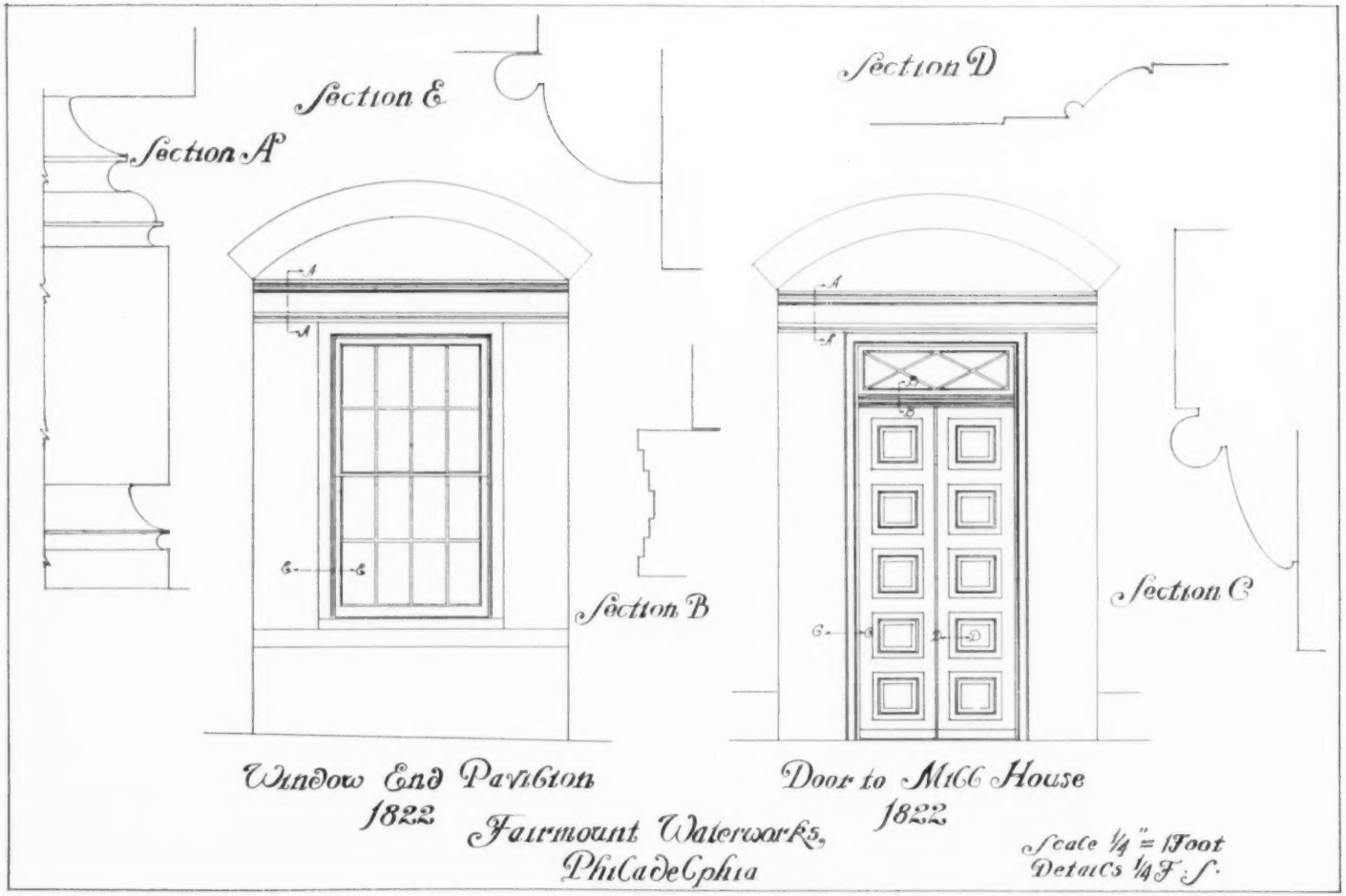
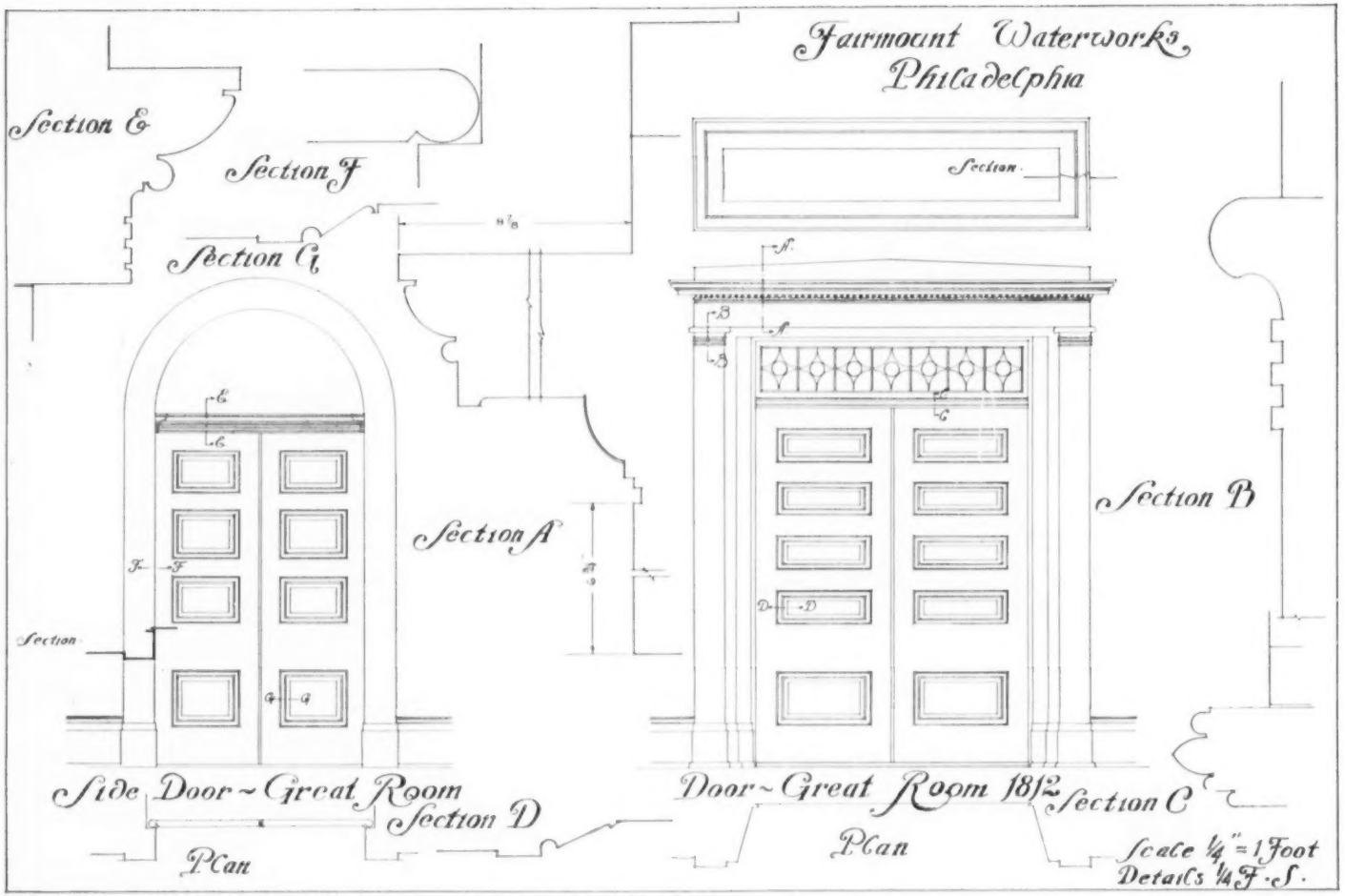
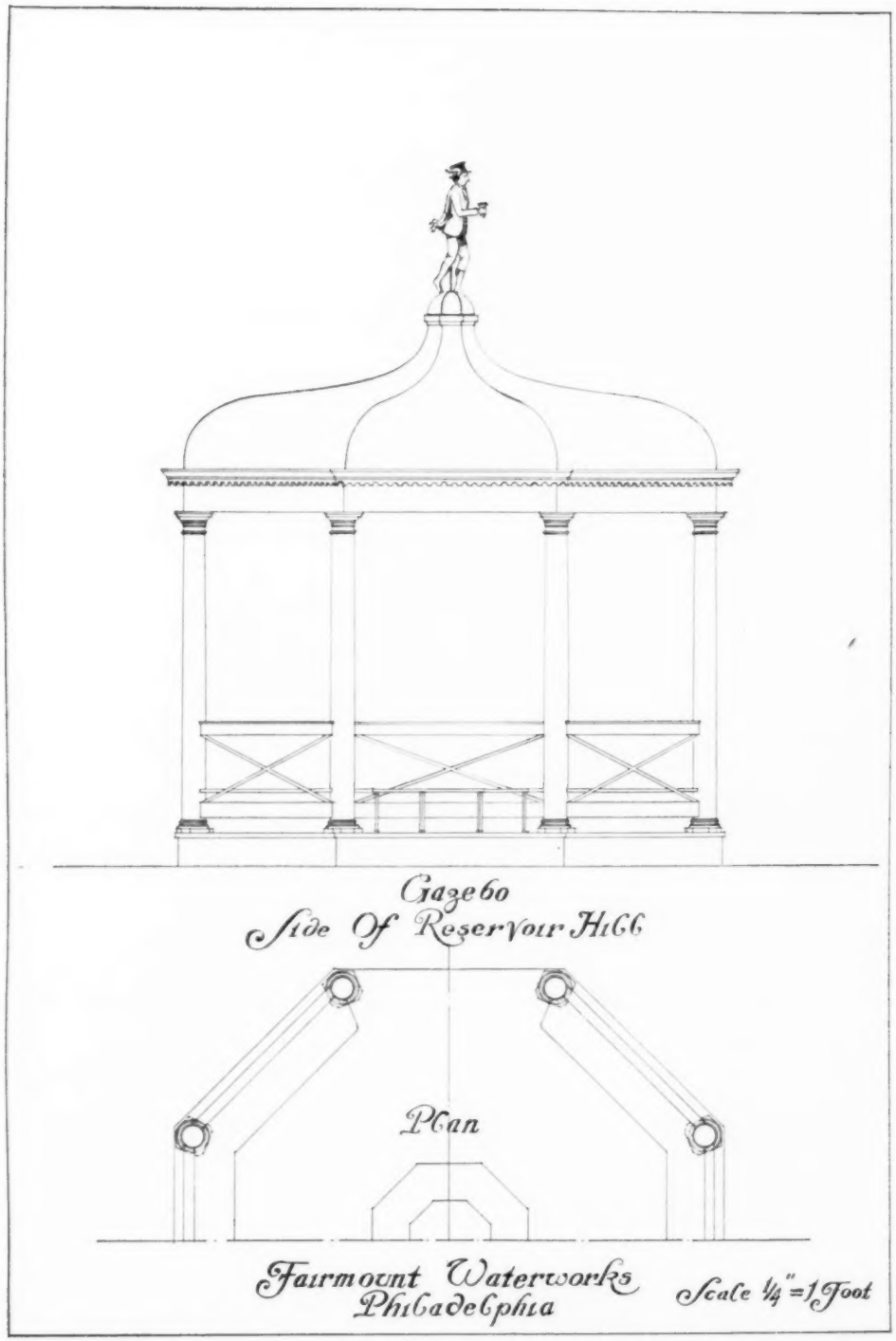

Section F
Section D
Section G
Section A
Section B
Window in Great Room
1812
Fairmount Waterworks
Philadelphia
Door-Side of Old Engine House
1812
Section C
SCALE 1/4 = 1 FOOT
DETAILS 1/4 F.S.
Section E


Section E
Section A
Section D
Section B
Section C
Window End Pavilion
1822
Door to Mill House
1822
Fairmount Waterworks,
Philadelphia
Scale 1/4" = 1 Foot
Details 1/4 F. S.


Fairmount Waterworks
Philadelphia
Section E
Section F
Section G
Section A
Section B
Section C
Section D
Side Door ~ Great Room
Plan
Door ~ Great Room 18½
Plan
Scale ¼" = 1 Foot
Details ¼ F.S.


Gazebo
Side Of Reservoir Hill
Plan
Fairmount Waterworks
Philadelphia
Scale 1/4" = 1 Foot

terpreted as it was by Latrobe and his contemporaries, profoundly affected the trend of public architecture for the first three decades of the nineteenth century, for Latrobe may justly be counted the father of monumental architecture in America.

The chronicle of the Philadelphia Waterworks unfolds a diverting narrative of evolution, and furnishes not a few sidelights upon the public attitude of the period towards architecture. The story, in brief, is this. Towards the end of the eighteenth century it became plainly evident that the people of Philadelphia could no longer depend upon their individual pumps and wells and that there must be installed a municipal supply of water. After somewhat more than the usual amount of preliminary discussion and opposition attending such matters, in 1799 Benjamin Henry Latrobe was commissioned to plan and install the city water system. By the end of 1801 the work was completed. Although at first there was bitter prejudice against the new source of supply, the people soon realized how much more abundant and convenient it was, gave up their antagonism and availed themselves of it.

In fact they used the city water so freely, and population increased so rapidly, that by 1810 the supply had become inadequate and the situation was so acute that some relief was imperative. Accordingly, it was decided to create a great reservoir on the top of Morris Hill, a rocky eminence that rose abruptly from the east bank of the river; thence the water could be piped by gravity to all parts of the city, and the pumping station in Centre Square could cease to operate. An engine house was to be built on the river bank at the foot of the reservoir hill, and in it were to be installed steam driven pumps of much greater power and capacity than those in use at the pumping stations first constructed. These pumps were to force a head of water up the hill through pipes to the top level of the reservoir. Frederick Graff, an engineer trained by Latrobe and superintendent of the old waterworks, was entrusted with this new undertaking. Work was begun in 1812 and completed by 1815. Between those years—probably

The Forebay and East Front, Fairmount Waterworks, Philadelphia
(From an early engraving)

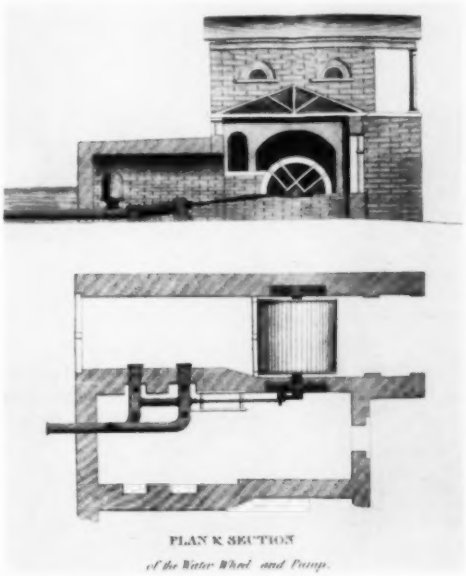
Courtesy of Philadelphia Water Bureau

by the latter part of 1813—the engine house (see page 59) was finished. By 1815 the reservoir on the hill top was done and the whole Fairmount plant was in working order.

Even the increased water supply, however, soon became insufficient for the needs of the growing city. Besides, the feeling was becoming stronger all the time that the expense of steam pumpage was unnecessary and that it would not only be far more economical if the pumping could be done by water power but that a greater volume of water also would be available for the city requirements.

Consequently, after negotiations with the Schuylkill Navigation Company—which controlled the dam and lock concessions—and with the owners of riparian rights in the immediate vicinity, consent was obtained to build a dam across the river just above the waterworks. By this means a sufficient volume of water was obtained to drive a series of turbines which forced up into the reservoir a far more copious stream than the old steam pumps. This system of pumpage was continued until very recent years.

When the dam was a-building, and in order to create a basin for the water from which it could pour into the wheel houses to drive the turbines and supply the pumps, the forebay (see page 64) was formed by blasting out an excavation from the rocky base of the hill. All of this newer development—the building of the dam, the blasting out of the forebay and the construction of the wheel houses—had been accomplished by the end of 1822.



PLAN & SECTION
of the Water Wheel and Pump.

Frederick Graff, Superintendent of Philadelphia Waterworks and Architect of Fairmount Waterworks

Courtesy of Philadelphia Water Bureau

The wheel houses or mill-buildings, as they were called at the time, are 238 feet long, including the two terminal pavilions, and as originally constructed 56 feet wide. Along the forebay (see pages 58 and 64) was a balustraded and brick-paved terrace 253 feet long and 26 feet wide. As finished in 1822 the parapet of the mill building was about on a level with the base of the two end pavilions and the two central entrances were surmounted by allegorical figures carved by William Rush. In 1865 the level of the terrace was raised several feet, the middle entrances were lifted to the same grade as the end pavilions, and between the middle entrances, on the new level, was constructed the temple-like pavilion which does not appear in the early engravings.

At the same time were built the ugly wooden huts which extend between the central pavilion and the end pavilions, and can be called hardly more than skylights for the structure beneath.

When the Fairmount Waterworks were shut down as a source of the city water supply and the reservoir was designated as a site for the new museum and art gallery, the waterworks buildings were converted to the purposes of an aquarium and are still used as such. The only considerable change made since that time in the immediate environment is the filling-in of the forebay, a regrettable performance that can only be characterized as a "fool trick" since it serves no purpose further than to afford space for a needless roadway and the disappearance of the forebay robs the eastern side of the buildings of more than half their former charm.

A few years ago a great hue and cry was raised over a false report that the demolition of the whole group was contemplated. It is only fair to Messrs. C. L. Borie, Jr., Horace Trumbauer and C. C. Zantzinger, associate architects of the new museum and art gallery, to say that they are fully conscious of the beauty of the old waterworks group, that they are duly appreciative of its significance as a historical monument, and that they never cherished any iconoclastic intentions with respect to it.

Great Room, Old Engine House, Fairmount Waterworks, Philadelphia

In all the city records, and in all the reports of the Water Bureau, the entire credit for the construction of the waterworks is given to Frederick Graff. For all the engineering in connection with

them we know that he was unquestionably responsible. By implication, he was responsible also for their architectural design. As a matter of fact, in none of the official reports nor in any of the contemporary newspaper notices can we find any very illuminating allusions to the architecture. A great deal is said about the engines and about the engineering achievements, but the architecture is taken as a matter of course and is virtually ignored, so far as any specific mention occurs. One of the reports gives some figures relative to the cost of the foundations and certain walls, and another states when the 1812 structure will be ready for occupancy. A later report gives us reason to believe that the wings were used by the families of employees, while the great room seems to have been used as a sort of "pump room" and a place of assembly and light refreshment for those who visited the works and made it the objective of their drives or walks from the city. Further comment seems to be entirely lacking.

Frederick Graff was trained by Latrobe, but so far as we can learn his training seems to have been especially in the direction of engineering and it is a question how much architectural aptitude he ever displayed. He was the superintendent of the old first waterworks, designed by Latrobe, and it was only natural that he should be entrusted with the responsibility of the later developments. If he was solely responsible for the design of the 1812 engine house and the 1822 mill buildings, he had made admirable use of the training he had received at Latrobe's hands. One cannot help feeling, however, that Latrobe or Robert Mills, or perhaps both, had some connection with the design of the waterworks buildings, although there is no documentary evidence to favor such a conclusion. William Rush, the wood-carver, we know was deeply interested and contributed some of his work. The two figures of Wisdom and Justice, now in the niches of the Great Room, were carved for the triumphal arch erected at the time of Lafayette's visit, in 1824. Afterwards, in 1835, they were placed in the Great Room. During Graff's activities Rush was a member of the City Councils and manifested his interest in a substantial way, but of Latrobe's hand we can find no visible evidence.

Figure of Wisdom, Carved by William Rush.
Great Room, Fairmount Waterworks, Philadelphia

The FERRO CONCRETE STYLE

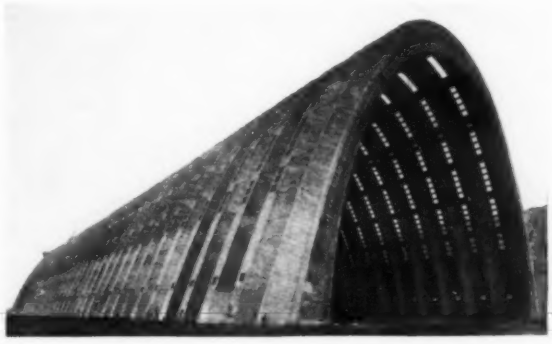
By

J. S. Onderdonk

ARCHITECTURALLY, concrete has not yet come into its own. It is considered useful but not beautiful by those who have not investigated its possibilities sufficiently.

Ferro Concrete is so different from all other materials used in the past that it is hard to see in advance what changes it will bring about. But a new Ferro Concrete Style *is* developing, notably in France and Central Europe.

The manner in which two columns or walls are bridged over is the chief characteristic of a style: the Egyptians and Greeks laid a beam from post to post; the Romans adopted this post-lintel construction, but also connected two columns by an arch and two walls by a vault as the Etruscans and Assyrians had done before them. The Gothic replaced the round arch of the Romanesque style by the pointed one, and their crossvaults were curved to correspond. Our modern wooden-frame house, like the steel-frame buildings, returns to the principles of the post and lintel construction, but steel being much stronger than stone we can build skyscrapers.



Airship Hangar, Orly, France

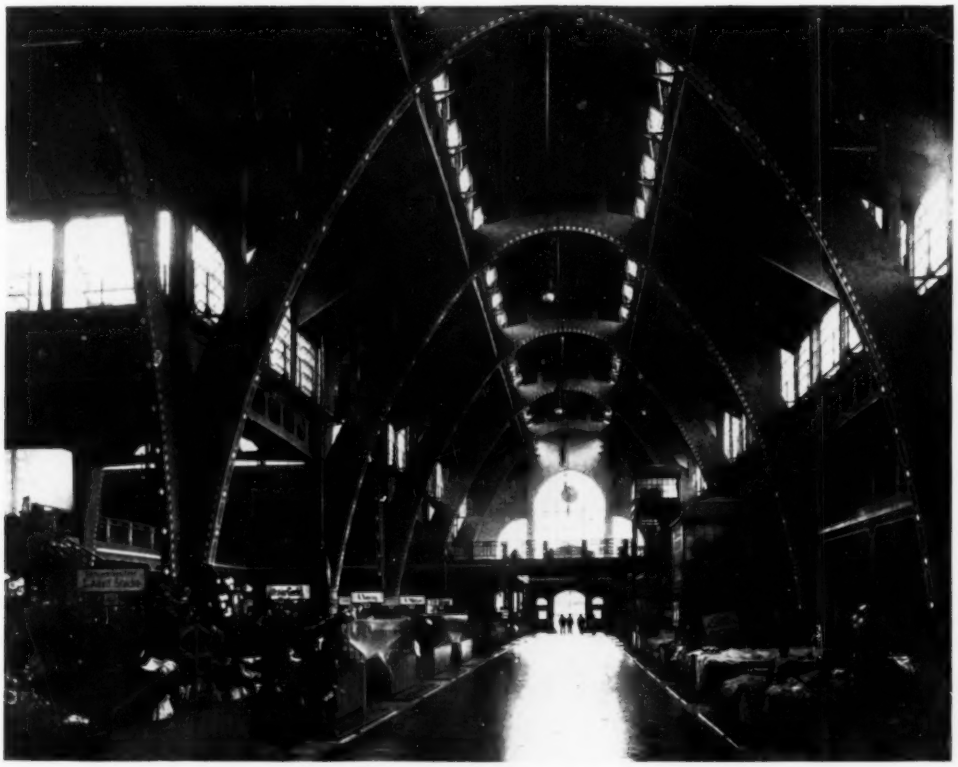
All the methods so far mentioned have one quality in common: they consist of pieces of stone, brick, wood or steel held together by mortar or rivets, nails, bolts, etc. Ferro Concrete is unique in creating buildings which form one solid mass; it has no "seams"—once the sand, gravel and steel have been cemented together.

In Reinforced Concrete columns and beams, walls and vault, vertical and horizontal members become *one*. Hence the logical type of the new style is a vault that springs from the ground (floor), serving in its lower parts as wall and in its top part as ceiling. Now the arch which curves gradually from the base to the crown is the parabola; near the base it is almost vertical and then curves more and more till at the top it approaches a semicircle.

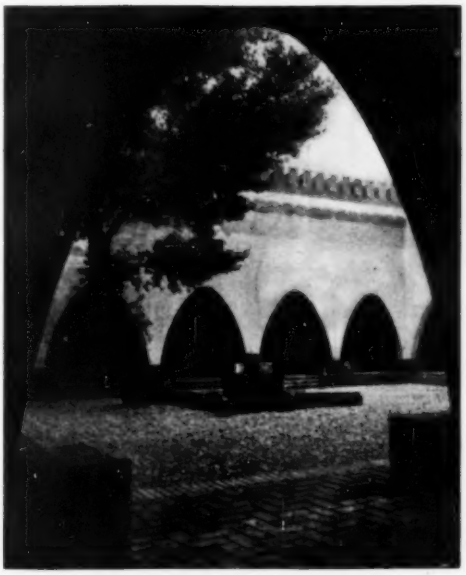
The parabolic arch is not only the logical solution—it is also a beautiful one. Hundreds of concrete bridges show its dynamic grace. Parabolic arches are the most economical ones; with a given load they require the smallest amount of material.

For the above reasons it is not surprising that several large halls which utilize the parabolic arch have been erected in Europe. The airship hangar at Orly, France, consists of a series of parabolic arches connected by horizontal bars forming oblong windows in between.

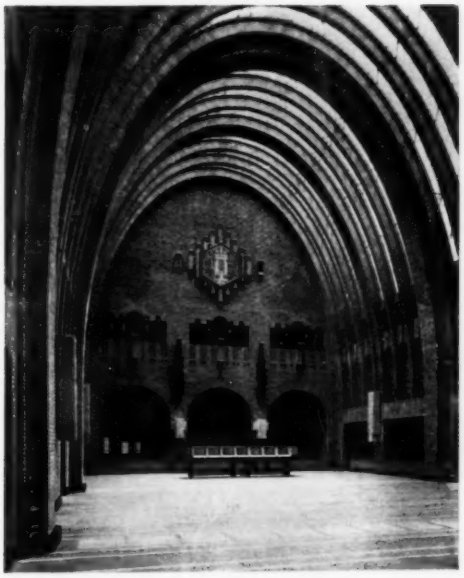
The noted German architect, Professor Kreis, designed a pavilion for the Munich "Farben-chau", featuring an arcade of parabolic arches which demonstrate the charm of unity possessed by that curve. Other remarkable examples



Ferro Concrete Arches in the Market Hall of Breslau, Germany



Pavilion for the Munich "Farbenschau"



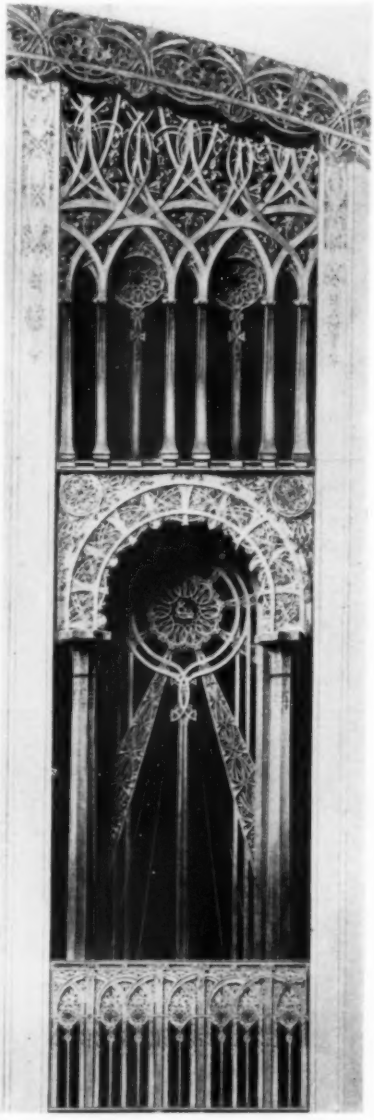
Interior of the New Post Office, Urecht, Holland

are the Market Hall at Breslau, Germany, and the post-office at Utrecht, Holland. The Swedish architect, Professor Wahlman, designed mighty parabolic arches for the crossing of the Engelbrekt church.

Also for small houses the parabolic vault has proved its usefulness: the walls of the English "Cat-Ar System" houses curve gradually into the roof so that the entire shell of the house forms a parabolic vault.

Architect Ch. Plumet designed the outline of the Lalique fountain for the Paris Exposition of Decorative Arts as a narrow parabola—thus in harmony with the curves of the water-jets that spouted forth in all directions from various levels. Gravity creates a Catenary (a curve very similar to a parabola) when acting on a flexible material (chain, ribbon) or drawing water earthwards—be it squirted from a horizontal spout or thundering over the Niagara Falls. The engineer creating a concrete bridge and the architect designing a lofty hall simply "listen in" to nature in choosing a parabolic arch.

A second characteristic of the future Ferro-Concrete Style will be a new type of tracery. As all parts of a concrete building are inwardly tied together by steel reinforcing rods, joints as well as minor moldings, which separate bases, columns, caps, etc., from each other in the traditional styles are no longer necessary or desirable in Ferro Concrete: large smooth planes contrasted to openings pierced in the concrete wall is the result. The openings can have any desired outline, as concrete is poured into curvilinear molds as easily as into angular ones. This must result in the creation of a specific Concrete Tracery. The window of the Bahai Temple, which is now being erected at Wilmette, Ill., shows the delicacy which can be obtained due to the Concrete being reinforced by steel.



Window of the Bahai Temple, Wilmette, Illinois

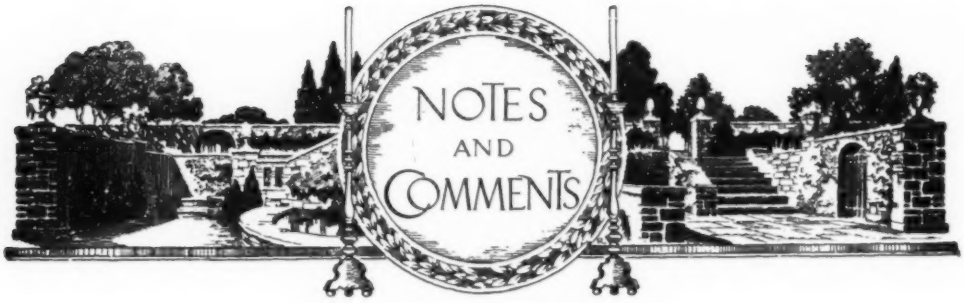
The French church at Le Raincy, published in the August, 1924, issue of THE ARCHITECTURAL RECORD, is one of the most remarkable examples of concrete tracery, though it belongs yet to the primitive type, the windows being resolved into simple geometric patterns.

The recently completed St. Thérèse at Montmagny (Paris), a church built likewise by A. and G. Perret, introduces a new epoch, as the entire wall surface consists of stone-lace concrete tracery. The light shines through the many openings of the farther wall so strongly that it pierces the colored glasses of the nearer wall revealing their brilliancy to the observer outside the church. On a sunny day the church has the appearance of a lamp shining through a multi-colored lampshade.

Concrete tracery promises to be the

glory of the Ferro Concrete Style. Reinforced concrete has conquered the third dimension and overcome the vertical contour; its unity and plasticity enable the adoption of freely designed, curved outlines for wall-apertures; the columns and floorslabs divide the façade in a series of areas which can be treated as the tympanum of a Greek temple; ornaments, figures, scenes can be designed in silhouette technique, the apertures with their shade serving as contrasting background. Stone was ill adapted to form the slender curved ribs of Gothic tracery; bendable steel bars and the adaptability of plastic concrete to all curves make reinforced concrete ideal material for slender tracery r i b s. On monumental buildings — churches, libraries, memorial buildings, etc., the concrete tracery would depict historic or symbolic scenes and could be enriched by mosaic.

Lalique Fountain designed for the Paris Exposition of Decorative Arts, 1925



The White House

The White House, the ideal home for the head of a democratic nation, is a monument to the genius of James Hoban and Charles F. McKim. Knowing the disastrous results of former changes, and fearing history may repeat itself, one trembles to hear of such extensive alterations as are now underway. The assurance from Major Grant that the present combustible attic is simply being replaced by a fireproof roof and second story ceiling, comes as a relief. The work of raising the roof a few inches and changing the pitch slightly, is being done under the advice of William A. Delano, architect, and with the approval of the National Commission of the Fine Arts.

In selecting the chaste Italian design of James Hoban from among the many crude drawings submitted in the competition for the "Presidents' Palace," George Washington showed his culture. Hoban, who had won distinction while a pupil in Dublin, quickly acquired a reputation in South Carolina, his work on the Capitol there being highly commended by prominent residents of that State. Soon after winning the competition in 1792, Hoban came to Washington and remained there until his death in 1832. Though occasionally acting as adviser on Government work, he did not undertake other commissions but devoted himself to the White House from 1792 to 1830.

The result of his work during these years was a refined Renaissance building, simple and chaste. The garden front looking down the Potomac was particularly attractive with its semicircular portico on the main building and the one story colonnades on the east and west. This composition made a charming background for the garden.

The building underwent little alteration until after the Civil War. From 1867 until its restoration, the exterior and interior suffered from vandals, many of the supposed betterments being architectural aberrations. The most daring contemplated change was the addition suggested by Col. Theodore A. Bingham, Eng. Corps, U. S. A.—a change which, if carried out, would have obliterated the White House and replaced it by an architectural monstrosity. The American Institute of Architects stopped this scheme by a nation wide protest to which McKinley gave heed and the White House was saved. Upon succeeding McKinley, Roosevelt, with his usual good sense, called in the services of McKim, Mead and White. McKim's aim was to restore the building inside and out, endeavoring to make it one of the best examples of its period. By his hypnotic influence, McKim passed on to me, his superintendent, a reverential enthusiasm for the restoration.

The following brief description of the accumulated errors in the account of the new work will give an idea of the depth to which the artistic condition of the building had fallen.

The east and west colonnades on the garden were not valued, the west one being hidden by glass propagating houses and the east one had been taken away in 1869. Under McKim's directions, against the violent protest of the gardener, the glass structures were removed, and the exposed west colonnade was duplicated by a new one on the east. It is interesting to note that we found the old foundations intact. They fitted, thus verifying the new drawings. While the exterior appearance of the building and the garden had been seriously marred by ignoring these extensions east and west, the interior had met a still worse fate. The basement corridor, dignified and stately with simple groined arch ceiling, had been turned into a conduit for plumbing, heat pipes and hot air chambers. This corridor was considered sufficiently important to have it restored to its former dignity. The walls were underpinned, a boiler cellar excavated, a subway for branches was run under the corridor, and all heat and plumbing pipes were placed out of sight. Guests who now attend Presidential receptions

are ushered through this stately restored hallway.

Passing administrations had each left an impress upon the principal floor that played havoc with the unity and beauty of the rooms. During Grant's administration the east room had been turned into an over-ornamented saloon, its decorations and furniture reminding one forcibly of the ornate saloons on the great Sound Steamers. McKim panelled the room from floor to ceiling, enriched it by fluted pilasters with carved caps, by panels in low relief and crowned it by a well designed cornice. The ceiling was chastely ornamented and from it hung well proportioned and gracefully formed crystal chandeliers. This room with its parquetry floor, simply tinted walls and ceiling and great chandeliers furnishes a stately hall for official functions.

An Interesting Back Window Arrangement in a house in Washington, D. C.

During Arthur's administration the entrance hall, which opened into the principal corridor, had been contracted by a glass screen of many colors. This with the elaborate grotesque plaster ornaments on walls and ceiling and a loudly colored tile floor, had turned the room into a typical palatial bar room of the period. The incongruous ornaments and glass screen were removed, thus combining the entrance hall with the main corridor, and the result was a hall of magnitude harmonious in color, refined in detail and dignified in composition.

The state dining room had been made common-place by trivial ornamentation and poor furniture. This room was now turned into a stately hall of the English Renaissance. Walls were panelled in beautifully grained English oak from floor to ceiling, divided by fluted pilasters with carved capitals, and crowned with a well proportioned cornice. The dark walls, the silver side lights, the Caen stone mantel, the mahogany table, tapestry covered chairs and polished parquetry floor contributed to make the room both artistic and dignified.

In the Red Room the vandalism in alterations which culminated during the Cleveland administration in the elaborate mantel and wood work over doors and windows, had resulted in a typical Pullman palace car interior. The Pullman creations were removed, proper architraves were put over the doors and windows and the charming Italian mantels replaced in both the red and green rooms. These mantels and marble pier tables had at some period been relegated to the attic where we found them. The refined taste of the old White House had been seriously mutilated and it was, I believe, only by McKim's skillful surgery that it passed without harm through many ordeals. The restoration was so successful that it was a factor in McKim's receiving the gold medal of the Royal Institute of British Architects. The restoration impressed Roosevelt so forcibly that he wrote Cass Gilbert, at that time President of the American Institute of Architects, the following letter:

"My dear Mr. Gilbert:

Now that I am about to leave office there is something I should like to say through you to the American Institute of Architects. During my incumbency of the Presidency, the White House, under Mr. McKim's direction, was restored to the beauty, dignity and simplicity of the original plan. It is now without and within literally the ideal house for the head of a great Democratic Republic. It should be a matter of pride and honorable obligation to the whole nation to prevent its in any way being marred.

If I had it in my power as I leave office, I should like to leave as a legacy to you and the American Institute of Architects the duty of preserving a perpetual "eye of guardianship" over the White House to see that it is kept unchanged and unmarred from this time on.

Sincerely yours,

THEODORE ROOSEVELT."

GLENN BROWN.

The Eleventh International Congress of Architects

Among the subjects listed for discussion at the International Congress of Architects are the following:

I. International Competitions.

2. Legal Protection of the title of Architect.

3. Architectural Copyright.

4. Architecture as Practiced by the Architect and the Architect-Builder.

5. Artistic Development of Architecture since 1900.

The Congress, to which representatives from all countries are invited, will be held in Amsterdam and The Hague from August 29th to September 4th. American architects desiring to be present are requested to communicate with George Oakley Totten, Jr., M.A.I.A., (Secretary of the American Section, International Congress of Architects) 808 Seventeenth Street, Washington, D. C.

National Fire Protection Association

A group of business leaders throughout the country are organizing a concerted attack on the fire menace, records covering which show an alarming increase in loss of life and property during recent years.

An investigation made by the National Fire Protection Association (a non-commercial organization which coördinates the efforts of all fire protection agencies and is independent of all special interests) proved that most of the fire losses last year resulted from carelessness with matches and cigarettes. This spells negligence in protecting inflammable structures, for with proper construction, sprinkler systems, fire alarms, fire stop walls and other precautions, fires can be checked before any material damage is done. It is estimated that ninety per cent of all fires are easily preventable and the other ten per cent controllable.

Speaking recently on this subject, Mr. Irving T. Bush, president of the Bush Terminal Company and one of the foremost leaders in the fire protection movement, stated ". . . . Since the World War America has lost more lives through fires than were lost in the War itself. We have destroyed in property during the same period the equivalent of two-thirds of the national wealth of Belgium. The damage Germany did to Belgium during the war was infinitesimal in comparison to the fire ravages we permit in America. The annual cost of fires in this country now is 12,000 lives and $500,000,000 in property. The waste is increasing instead of decreasing, and unless we have sense enough to put a stop to this colossal carelessness we are going to impoverish ourselves sadly."

"One of the reasons for the callous attitude toward fires in America," Mr. Bush said, "is the fallacy entertained by most people in respect to insurance. It is commonly supposed that fire insurance companies are the losers through fires. The fact is that fire insurance companies only distribute the losses, and premium payers actually pay them, passing the loss on where possible to the public.

"In America the per capita cost annually is $5.00, as compared to less than fifty cents in Europe. The attitude of any community toward fire prevention is written into its insurance rates."

Plans for Barcelona Free Port

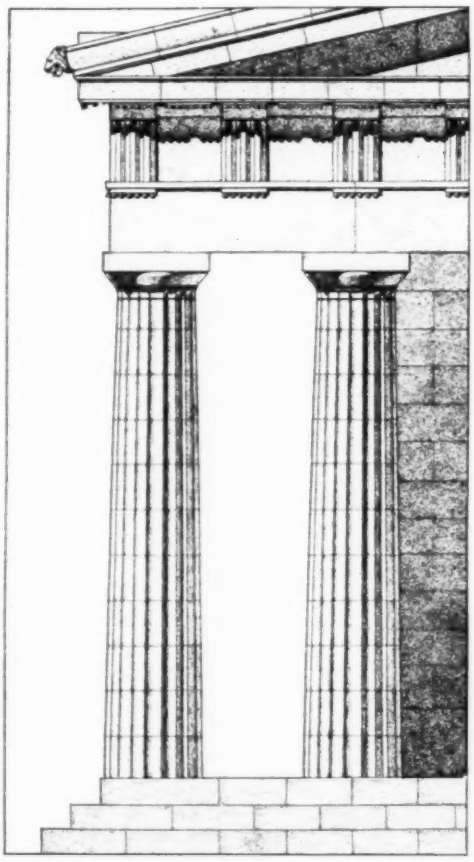
Announcement has been made of an international competition for plans for the proposed free port of Barcelona, Spain. Prizes of 100,000 pesetas, 26,000 pesetas and 10,000 pesetas are offered. Closing date for receipt of competition drawings is December 9, 1927. Further details may be obtained from the office of Mr. M. B. Morehouse, Department of Commerce, 734 Custom House, New York, where, also, descriptive matter may be inspected.

A Bureau for Registration of Draughtsmen Seeking Positions

The Architectural League of New York (215 West 57th Street) announces the organization of a bureau for the registration of draughtsmen seeking positions. Architects desiring to fill vacancies in their offices should apply to Miss Simpson, Assistant Secretary, who has complete information on file concerning the education, practical experience, references, etc., of each daughtsman enrolled at the bureau.

A Background to Architecture*

This is a moderate sized octavo, moderately illustrated, and planned not as a history of architecture but as an introduction to the histories. The author found in his years of teaching that there was a need of such a preface, because the subject is so large and complex that the student loses his way. He seems to need something preliminary to fix in his mind: first, certain principles and laws, and then, in respect to the history of architecture, certain of the main eras or groupings, large substantial landmarks by the aid of which he may keep his bearings. Accordingly Mr. Rathbun's first chapter is on "Fundamentals"; Chapter 2, Egypt; Chapter 3, Egyptian Architecture, then Rome, Roman Architecture; France, Gothic Architecture; Italy, Renaissance Architecture; England, English Architecture; and a final chapter on Possibilities. The scheme is logical and intentionally simple. It is like the architectural composition of base, column and capital, the column being the main body of the historical survey, based in fundamentals, and topped by possibilities.



THE DORIC ORDER
From *A Background to Architecture*

In "Fundamentals" we have to do first with definitions and beginnings, with the philosophy of architecture, its nature, its resemblances to and differences from other arts, its relations with history, its continuity and the value of tradition. The forms are the results of inheritance from the past, of climate and the materials at hand; but the choice of them and their development into fixed types depend on the nature of the race and the degree of its civilization. The quality that results from this racial sense pervades the whole building and is paralleled by the other arts of the same era.

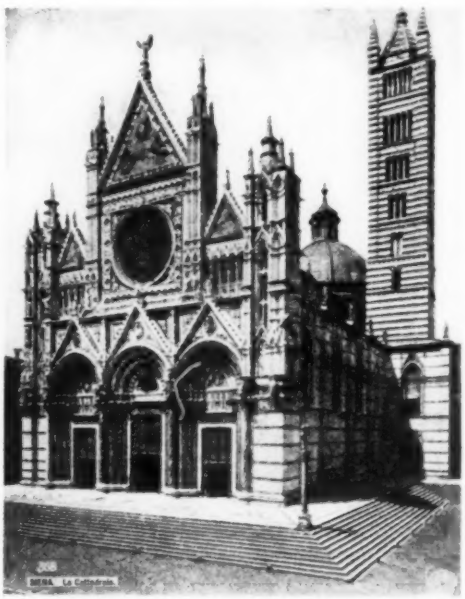
To illustrate this development the discussion then turns to certain typical forms, the column, the arch, the moulding. Every architectural form has a dual nature, utilitarian and aesthetic. It must do its work, and also do it with as much beauty as possible. The beauty of the form is always on safer ground if it still indicates the service which it performs. Mr. Rathbun's illustration of the development of mouldings from the simple to the multiple shows, at each step, some purpose served.

To deal adequately with each of these six

**A Background to Architecture*, by Seward Rathbun. Yale University Press. $4.

landmarks of architectural history is impossible here. Each chapter on an architectural era is preceded by a chapter on the country and people where and among whom that era occurred, or where its principle field is to be found. The method has the precision desired. It masses the social phenomena and climatic background, and then lays against it the architectural outgrowth. It brings out more forcibly than most methods the fact that architecture is history, in some respects the most eloquent as well as the most veracious of histories.

To turn to the last chapter, on Possibilities. Of the problems of the present and its prospects (in distinction from the great periods of architecture in the past) we have today more knowledge and less enthusiasm. This condition is an obstacle to creation, but makes possible a standard of judgment. We can at least utilize our knowledge. Now the basic fact of architecture is structure. Every art has a physical basis, but in architecture this basis is self-existent; it cannot be absorbed by expression and divorced from other duty. What then shall be the relation in architecture between structure and art? Shall we admit structure or hide it? If we consult our knowledge, we find the following:



From *A Background to Architecture*

We find that Egypt never attempted to hide a single fact of structure. That Greece wrought a balance—the structure was art and the art was structure, there was a complete synthesis. Rome borrowed the art to cover a framework of which she seemed to be ashamed—her architecture was an endless contradiction. The Gothic period developed its structure from Roman suggestion and created its art out of the structure, so that it glorified and never contradicted it. The Renaissance went back to Rome for art and neglected structure in its expression so far as possible; it built pictures. England absorbed Gothic and Renaissance, and her best (for instance, the Tudor manor house) was as unified as the Greek.

Here are the six greatest enthusiasms of our west summarized. Four voted for recognition of structure; two against—Roman and its cultural heir the Renaissance—and most students agree that these two are the least expressive. The conclusion is that the recognition of structural requirements is fundamental in the greatest architecture.

Furthermore the dominant feature of our age is its science, and the scientific point of view will not tolerate the ignoring of facts, hence if our architecture is to stand true to its period, it will express itself most frankly in structure.

And this, in a sense, is the main trend of Mr. Rathbun's teaching, that decoration should always be related to, not attempt to hide or ignore the structural intent.

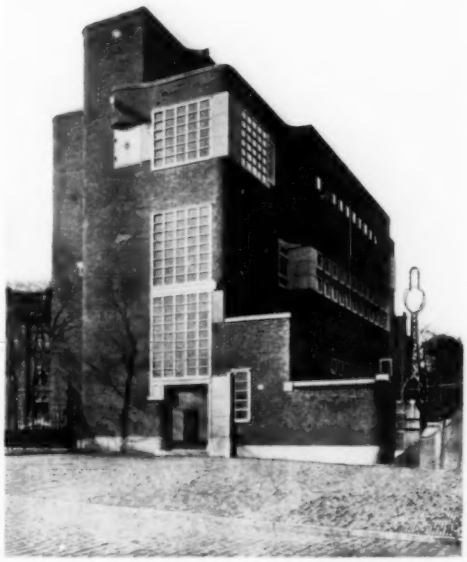
The inclusion of English architecture among the six is perhaps unexpected. The defense of it covers all forms of English building, but essentially narrows down to domestic architecture and specifically to the manor house, as the expression of racial instinct and character. The Englishman's temple is his home, and the expression of that feeling has nowhere else been so effective.

Mr. Rathbun's book seems to be easy reading until one notices that it is very condensed. The arrangement is plain and the language is plain, but it deals very much in general ideas and often gives only the nucleus of a thought that has many implications. Although quite uncontroversial in manner, it represents positive opinions that are sometimes open of course to controversy. It is a book that a teacher of architecture would be more apt to write than a busy practicing architect, and for that reason is the more worth reading by the practicing architect, whose life is full of details and immediate problems. It is a book that carries weight and repays study. ARTHUR W. COLTON.

Nieuw Nederlandsche Bouwkunst (Volume II)*

In approaching the work of a particular group of men, such as the Hollanders of today, one appreciates the necessity of most impartial consideration, free of the normal prejudice against anything particularly different. In this volume of modern work, public buildings, school houses, churches, and the like, all show with marked clarity, tendencies of design that, under any circumstances, are peculiarly characteristic of Holland. These buildings, covering a wide range of subjects and by an equally varied group of designers, show conclusively that Holland is not reproducing the contemporary fashion of France, Germany, or Austria, and that in a restricted area and with obviously limited opportunity Dutch architects are producing work that has power and interest of unusual degree. Beauty is a term of comparison so that before assuming high artistic value it may be pertinent to concentrate on the qualities that stamp these works as individual.

Having brick as a normal building material, the Hollanders quite intelligently have maintained a brick architecture such as the Netherlands have enjoyed for centuries in the past. The use of reinforced concrete has permitted structural variations of unlimited degree though what is aggressive and positive is the complete emancipation from borrowed styles of every age and country. Holland has suffered historically through influences that were more martial than aesthetic, and contains Gothic buildings, Renaissance echoes, Baroque agonies, that, curiously enough, retained some Dutch flavor through the heavy layer of foreign form. Quite possibly the excellent Dutch construction, the splendid handling of brick, was the substance of quality though one can hardly claim that these borrowed styles rank with their ancestors.



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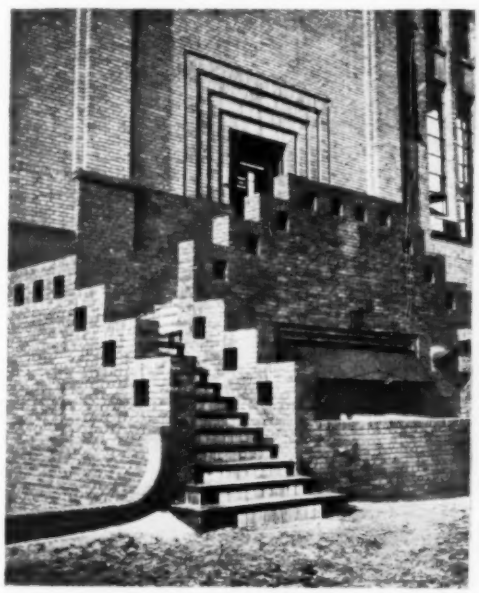

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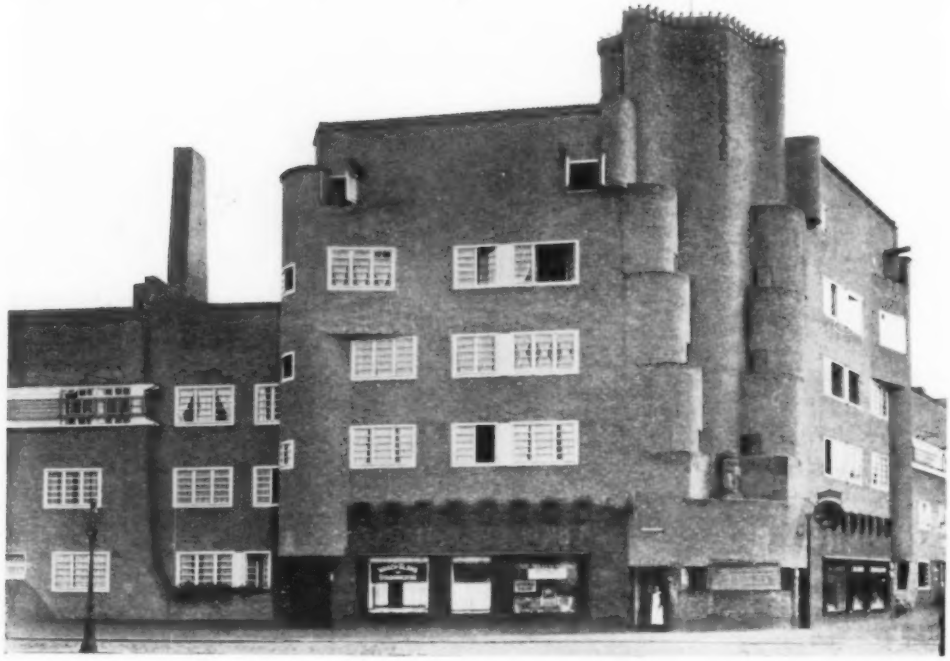
These modern Hollanders are unfortunately so positive about their emancipation that their work seems to suffer through this very insistence. Admitting the extreme difficulty of a fair comparison, and making allowances for variations of temperament, it seems impossible to reconcile many of the exaggerated forms that are so manifestly becoming stylistic in equal degree to any tradition of the past.

Horizontal lines, in contrast to the usual vertical accents of Gothic or Renaissance architecture, become so positive that one is conscious of an almost abnormal fear of a vertical line. The flatness of Dutch landscape can hardly account for such sudden and universal agreement and it is far more likely that there is some purposeful decision—a recall of our own Frank Lloyd Wright, possibly—that is making

**Nieuw Nederlandsche Bouwkunst* (Vol. II), by Prof. Dr. J. G. Wattjes. Amsterdam: Uitgevers-Maatschappij "Kosmos." 1926.



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the horizontal emphasis so characteristic. Arched forms are sparingly used and the Gothic spirit in any form is taboo. Large rounded masses of brick are quite common. Built with superb mastery of brick technique, one is nevertheless puzzled to account for their existence on any basis but that of applied decoration. Many of the façades fail to explain the slightest reason for their presence so that one is forced to assume, in spite of the agreeable forms, that the designer is following rather blindly, merely another convention no less evil than any other false creed. The frenzy to be different is pushing many of these men to do foolish things; tortured forms that are, without cavil, entirely and horribly new. This may be expected, quite naturally, in view of a situation where there seems to be an almost general demand on the part of the public, as well as the artists, for an expression of something truly national. One senses reminiscences of England, and even America, in domestic work, though, on the whole, the buildings maintain the flat arch and horizontal line with such regularity that the effect is recognized through any inspiration. Quite often when the Hollander permits his fancy to wander, such queer results as the Pavilion of the Netherlands at the Paris Exhibition in 1925 evolve. There is astounding skill in the use of brick, but equal irritation at a design that seemed to be marked more by cleverness than good design. The structural possibilities, due to the skill of reinforced concrete, permitted every variety of surprise to be employed with a result that one was startled with enormous slabs of concrete apparently resting on glass; curious shapes that developed into a strange composition of rectangular forms in complete antithesis to anything one may have seen before.

In spite of these particular criticisms, one cannot avoid commenting on the positive contribution this work is making as an expression of a people which chooses to express its own conception of taste and design. The modern designers with new problems have the courage to face them and, quite in line with other experiments, there will be stages of error and failure with the coincident proportion of real achievement. The interior designs, as a whole, are grievously disappointing. In seeing the work of our middle Western architects some one must have suspected that our bereaved Mission furniture was an inspired product, and behold! its geometrical bulk returns as modern Dutch. The subtle quality of the French

work of this moment is lacking as is the charm and grace of much of the German and Austrian interior design. Suffice it to say, however, that there is no lack of courage in artistic Holland and a great measure of independent and constructive thought. In quick comparison to the rock ribbed American tradition, there is complete scorn of the fake antique, the basis of most residential work in America, absolute avoidance of classicism in any form in Greek, Roman, Egyptian, Gothic, or what you will, and quite an earnest effort to find solutions that are practical, modern and Dutch.

E. J. KAHN

Theory and Elements of Architecture. Vol. 1 Part 1. The Simpler Elements. By Robert Atkinson, F.R.I.B.A., and Hope Bagenal, A.R.I.B.A., D.C.M. New York: Robert M. McBride & Co., 1926. 1st ed. x. 402 pp. Ill. 7½ x 10 in. Cloth. $10.00.

Theory and Elements of Architecture is a text-book on Architecture, a history of structure and a method of teaching design. The first volumes deal with the common vocabulary of Architecture, namely, walls, roofs, openings, piers, columns, mouldings and the rest, and also contain chapters on ornament and on systems of proportion. The subjects are discussed with continual reference to modern requirements, and also upon the principle that modern requirements are part of an historical process. The illustrations have been carefully chosen from wide sources, and are intended to help both elementary and advanced students. A selection of the references is arranged in the form of bibliographies at the end of each chapter.

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Le Mobilier Francais d'Aujourd'hui. (1910-1925). By Pierre Olmer. Paris, France: Librairie Nationale d'Art et d'Histoire (G. Van Oest). 1926. 1st ed. 60 pp. 32 page plates. 6⅜ x 8⅜ in. Paper. 15 francs.

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